

## CONTRACT

**THIS CONTRACT for Data Telecommunications Services, RFP F50B4400028 (the “Contract” or “Master Contract”)** is made this 24 day of April, 2020 (the “Effective Date”) by and between MASTER CONTRACTOR and the customer **STATE OF MARYLAND**, acting through the **DEPARTMENT OF INFORMATION TECHNOLOGY** (“DoIT” or sometimes the “Agency”).

**IN CONSIDERATION** of the premises and the covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows: the parties agree as follows:

### 1. Definitions

In this Contract, the following words have the meanings indicated:

1.1. “Master Contractor” means Comcast Business Communications, LLC whose principal business address is One Comcast Center, 1701 John F. Kennedy Boulevard, Philadelphia, PA 19103.

1.2. “Contract Manager” means the DoIT representative and first point of contact for contract procedures and any discrepancies. The Agency may change the Contract Manager at any time by written notice.

1.3. “Department” means the Department of Information Technology (DoIT).

1.4. “Financial Proposal” means the Master Contractor’s Financial Proposal (BAFO) dated April 24, 2018 attached hereto as Exhibit L.

1.5. “Notice to Proceed (NTP)” means a formal written notification from the Contract Manager that a specific Master Contractor selected to perform a PO should immediately, or as of a date contained in the notice, begin performance of the PO.

1.6. “Procurement Officer” means the person with the responsibilities and authorities of “procurement officer” under the Annotated Code of Maryland, and Title 21 of the Code of Maryland Regulations (“COMAR”) or their designee. The Agency may change the Procurement Officer at any time by written notice.

1.7. “Purchase “Order (PO)” authorizes Master Contractor to proceed with delivery of products and/or any services requested by a PORFP.

1.8. “RFP” means the Request for Proposals for Data Telecommunications Services, Expansion Window #1, Solicitation No. F50B4400028, dated March 31, 2018, and any amendments thereto issued in writing by the State as of the Effective Date.

1.9. "State" means the State of Maryland.

1.10. "Agreement" means a signed contract between DoIT and the Master Contractor selected via a PORFP or to perform a service.

1.11. "Proposal" means the technical and financial response by a Master Contractor to a PORFP.

1.12. "Purchase Order Request for Proposals" (PORFP) means a solicitation document containing a description by the State of the individual project for which proposals will be solicited.

1.13. "Technical Proposal" means the Master Contractor's Technical Proposal, dated May 10, 2018 attached hereto as Exhibit K and subsequent clarification responses, vendor discussion handouts and vendor discussion responses, etc. submitted in writing by the Master Contractor.

## **2. Statement of Work**

2.1. The Master Contractor shall provide Data Telecommunications Services for the State as described in this Contract, in one or more of the functional area- LATA combinations as follows:

- Functional Area III – Last Mile Access Data Service
- Functional Area IV- Commodity Internet Service Delivery

2.2. These services shall be provided in accordance with the terms and conditions of this Contract and the following Exhibits, which are attached and incorporated herein by reference. If there are any inconsistencies between this Contract and Exhibits A through G, the terms of this Contract shall control. If there is any conflict among the Exhibits, the following order of precedence shall determine the prevailing provision.

Exhibit A – Request For Proposal No. F50B4400028

Exhibit B – Comcast Enterprise General Terms and Conditions

Exhibit C – Comcast Enterprise Services Product Specific Attachment – Cable Modem  
Internet Services

Exhibit D – Comcast Enterprise Services Product Specific Attachment – Ethernet Dedicated  
Internet Services

Exhibit E – Comcast Enterprise Services Product Specific Attachment – Ethernet Transport  
Services

Exhibit F – Comcast Enterprise Services Product Specific Attachment – Intrastate Ethernet  
Transport Services

Exhibit G – Purchase Order (when executed)

Exhibit H – Master Contractor's response to a PORFP (when submitted)

Exhibit I – a PORFP (when released)

Exhibit J – State Contract Affidavit, executed by the Master Contractor and dated 08-02-2019

Exhibit K – Technical Proposal to the RFP

Exhibit L – Financial Proposal to the RFP

2.3. The Procurement Officer may, at any time, by written order, make changes in the work within the general scope of the Master Contract, the PORFP or the PO. No other order, statement or conduct of the Procurement Officer or any other person shall be treated as a change or entitle the Master Contractor to an equitable adjustment under this section. Except as otherwise provided in this Master Contract, if any change under this section causes an increase or decrease in the Master Contractor's cost of, or the time required for, the performance of any part of the work, whether or not changed by the order, an equitable adjustment in the Master Contract price shall be made and the Master Contract modified in writing accordingly. The Master Contractor must assert in writing its right to an adjustment under this section within thirty (30) days of receipt of written change order and shall include a written statement setting forth the nature and cost of such claim. No claim by the Master Contractor shall be allowed if asserted after final payment under this Master Contract. Failure to agree to an adjustment under this section shall be a dispute under Section 11, Disputes. Nothing in this section shall excuse the Master Contractor from proceeding with the Master Contract as changed.

### **3. Time for Performance**

The Master Contractor shall provide services, equipment and software in accordance with this Master Contract and any PO issued hereunder. The term of this Master Contract is for a period beginning on the Effective Date, and ending December 31, 2026, unless terminated earlier as provided in this Master Contract. All prices for rates and terms as offered in Exhibit L are binding on the Master Contractor for the term of the Master Contract.

### **4. Consideration and Payment**

4.1. In consideration of the satisfactory performance of the work set forth in this Master Contract and any PO, the State shall pay the Master Contractor in accordance with the rates established in the Master Contractor's PO Proposal which may not exceed the rates and terms of Master Contractor's Financial Proposal. POs that are on a time and materials basis shall include a NTE ceiling for payments. Any work performed by the Master Contractor in excess of the NTE ceiling amount of any PO without the prior written approval of the Contract Manager is at the Master Contractor's risk of non-payment. Payments under POs issued on a fixed price basis shall be limited to the price specified in the PO, regardless of the actual cost to the Master Contractor. Notwithstanding anything to the contrary contained in this Contract (including, for the avoidance of doubt the RFP and Section 1.5.1 of the RFP), the parties acknowledge and agree that (i) Contractor's Pricing Proposal attached to this Contract as Exhibit L represents the maximize rates that Contractor may charge for services provided under a PORFP (the "Maximum Rates"), (ii) Contractor may, but shall not be obligated to, provide, or offer to provide, the applicable services under a PORFP at rates below the Maximum Rates and (iii) once Contractor has agreed to provide services under a PORFP at a given rate(s), Contractor shall have no obligation to reduce and/or change such rate(s) during the term of such PORFP

4.2. Invoices must be provided in the format and on the schedule identified in the PORFP. Each invoice must reflect the Master Contractor's federal tax identification number, which is 23-2736203. Payments to the Master Contractor pursuant to this Master Contract shall be made no later than 30 days after the State's receipt of a proper invoice from the Master Contractor. Charges for late payment of invoices, other than as prescribed by Title 15, Subtitle 1, of the State Finance and Procurement Article, Annotated Code of Maryland, are prohibited. A PO may specify periodic payments based on deliverables or stages of completion. A PO may specify that a portion of the payments due will be withheld until completion of the PO. The amount withheld from each payment shall be paid to the Master Contractor within thirty (30) days of the State's acceptance of all deliverables required under the PO and receipt from the Master Contractor of a release in a form prescribed by the State for any claims arising out of or related to the PO. The final payment under this Master Contract will not be made until after certification is received from the Comptroller of the State that all taxes have been paid.

4.3. In addition to any other available remedies if, in the opinion of the Procurement Officer, the Master Contractor fails to perform under this Master Contract in a satisfactory and timely manner, the Procurement Officer may refuse or limit approval of any invoice for payment, and may cause payments to the Master Contractor to be reduced or withheld until such time as the Master Contractor meets performance standards as established by the Procurement Officer pursuant to this Master Contract.

4.4. The State will use electronic funds transfer to pay the Master Contractor for this Master Contract and any purchase orders issued thereunder and any other State payments due Master Contractor unless the State's Comptroller's Office grants the Master Contractor an exemption.

## **5. PORFPs**

A PORFP may specify terms in addition to the terms specified herein. Such additional terms may include warranties, deliverables, and acceptance test requirements. A PO may not limit the either party's rights as provided by law, in this Master Contract, or in the RFP and may not change the terms of this Master Contract or the RFP.

## **6. Patents, Copyrights, Intellectual Property**

6.1. If the Master Contractor furnishes any design, device, material, process, or other item, which is covered by a patent or copyright or which is proprietary to or a trade secret of another, the Master Contractor shall obtain the necessary permission or license to permit the State to use such item or items.

6.2. The Master Contractor agrees that at all times during the term of this Master Contract and thereafter, works created as a deliverable under this Contract and services performed under this Master Contract shall be "works made for hire" as that term is interpreted under U.S. copyright law. To the extent that any products created as a deliverable under this Master Contract are not works for hire for the State, the Master Contractor shall state why it believes that it should not thereby relinquish, transfer, and assign to the State all of its rights, title, and interest (including all intellectual property rights) to all such products created under this Master Contract.

6.3. The Master Contractor shall hold and save harmless the State of Maryland, including, but not limited to, the Department and its agents, officers, and employees, from liability of any nature or kind arising out of a claim or suit for or on account of the use of any copyrighted or uncopyrighted composition, trademark, service mark, secure process, patented or unpatented invention, article or appliance furnished or used in the performance of any Master Contract resulting from this RFP. The Master Contractor agrees to assume the defense of any and all such suits and pay the costs and expenses incidental hereto, subject to the right of the State to provide additional legal counsel at the State's own expense. If a third party claims that a product infringes that party's patent or copyright, the Master Contractor will defend the State against that claim at Master Contractor's expense and will pay all damages, costs and attorney fees that a Court finally awards, provided the State (i) notifies the Master Contractor in writing of the claim within a reasonable time after the State's receipt of such claim, with the understanding that the State's failure to give reasonably timely notice shall not relieve Master Contractor of any obligation hereunder except and to the extent that such failure prejudices Master Contractor's ability to defend against such claim; and (ii) allows Master Contractor to control, and cooperates with Master Contractor in, the defense and any related settlement negotiations.

6.4. If any products furnished by the Master Contractor become, or in the Master Contractor's opinion are likely to become, the subject of a claim of infringement, the Master Contractor shall, after consultation with the State and at the Master Contractor's own expense: (a) procure for the State the right to continue using the applicable item, (b) replace the product with a non-fringing product that, in the State's view, substantially complies with the item's specifications, or (c) modify the item so that it becomes non-infringing and, in the State's view, performs in a substantially similar manner to the original item.

6.5. In connection with services provided under a PORFP, the Master Contractor may create, acquire or otherwise have rights in, and may, employ, provide, create, acquire or otherwise obtain rights in various concepts, ideas, methods, methodologies, procedures, processes, know-how, techniques, models, templates and general purpose consulting and software tools, utilities and routines (collectively, the "Contractor Technology"). To the extent that any Master Contractor Technology is contained in any of the Master Contract deliverables including any derivative works, the Master Contractor grants the State a royalty-free, fully paid, worldwide, perpetual, non-exclusive license to use such Contractor Technology in connection with the Master Contract deliverables for the State's purposes.

6.6. The Master Contractor shall not acquire any right, title and interest in and to the copyrights for goods, any and all software, technical information, specifications, drawings, records, documentation, data or derivative works thereof, or other work products provided by the State to the Master Contractor. In a PORFP, the State may, in its sole discretion, elect to grant the Master Contractor a worldwide, perpetual, non-exclusive license, for which the State may require compensation, perhaps in the form of a royalty, for the Master Contractor's internal use to non-confidential Contract deliverables first originated and prepared by the Master Contractor for delivery to the State.

## **7. Rights to Records**

7.1. The Master Contractor agrees that all documents and materials, including but not limited to, reports, drawings, studies, specifications, estimates, tests, maps, photographs, designs,

graphics, mechanical, artwork, computations and data prepared by the Master Contractor for the State for the purposes of this Master Contract shall be the sole property of the State and shall be available to the State at any time. The State shall have the right to use the same without restriction and without compensation to the Master Contractor other than that specifically provided by this Master Contract.

7.2. The Master Contractor shall report to the Department, promptly and in written detail, each notice or claim of copyright infringement received by the Master Contractor with respect to all data delivered under this Master Contract.

7.3. The Master Contractor shall not affix any restrictive markings upon any data and if such markings are affixed, the State shall have the right at any time to modify, remove, obliterate, or ignore such warnings.

## **8. Confidentiality**

Subject to the Maryland Public Information Act and any other applicable laws, all confidential or proprietary information and documentation relating to either party (including without limitation, any information or data stored within the Master Contractor's computer systems) shall be held in absolute confidence by the other party. Each party shall, however, be permitted to disclose relevant confidential information to its officers, agents and employees to the extent that such disclosure is necessary for the performance of their duties under this Master Contract, provided the data may be collected, used, disclosed, stored and disseminated only as provided by and consistent with the law. The provisions of this section shall not apply to information that (a) is lawfully in the public domain; (b) has been independently developed by the other party without violation of this Master Contract; (c) was already in the possession of such party; (d) was supplied to such party by a third party lawfully in possession thereof and legally permitted to further disclose the information; or (e) which such party is required to disclose by law.

## **9. Loss of Data**

In the event of loss of any State data or records where such loss is due to the intentional act or omission, or negligence of the Master Contractor or any of its subcontractors or agents, the Master Contractor shall be responsible for recreating such lost data in the manner and on the schedule set by the Master Contract Manager. The Master Contractor shall ensure that all data is backed up and is recoverable by the Master Contractor.

## **10. Non-Hiring of Employees**

No official or employee of the State as defined under State Government Article section 15-102, Annotated Code of Maryland, whose duties as such official or employee include matters relating to or affecting the subject matter of this Master Contract shall, during the pendency and term of this Master Contract and while serving as an official or employee of the State, become or be an employee of the Master Contractor or any entity that is a subcontractor on this Master Contract.

## **11. Disputes**

This Master Contract shall be subject to the provisions of Title 15, Subtitle 2, of the State Finance and Procurement Article of the Annotated Code of Maryland, as and COMAR 21.10 (Administrative and Civil Remedies). Pending resolution of a claim, the Master Contractor shall proceed diligently with the performance of the Master Contract in accordance with the Procurement Officer's decision. Unless a lesser period is provided by applicable statute, regulation, or the Master Contract, the Master Contractor must file a written notice of claim with the Procurement Officer within 30 days after the basis for the claim is known or should have been known, whichever is earlier. Contemporaneously with or within 30 days of the filing of a notice of claim, but no later than the date of final payment under the Master Contract, the Master Contractor must submit to the Procurement Officer its written claim containing the information specified in COMAR 21.10.04.02.

## **12. Maryland Law**

This Master Contract shall be construed, interpreted, and enforced according to the laws of the State of Maryland. The Maryland Uniform Computer Information Transactions Act (Commercial Law Article, Title 22 of the Annotated Code of Maryland) does not apply to this Master Contract or any software license acquired hereunder. Any and all references to the Annotated Code of Maryland contained in this Master Contract shall be construed to refer to such Code sections as from time to time amended.

## **13. Nondiscrimination in Employment**

The Master Contractor agrees: (a) not to discriminate in any manner against an employee or applicant for employment because of race, color, religion, creed, age, sex, marital status, national origin, ancestry, or disability of a qualified individual with a disability; (b) to include a provision similar to that contained in subsection (a), above, in any subcontract except a subcontract for standard commercial supplies or raw materials; and (c) to post and to cause subcontractors to post in conspicuous places available to employees and applicants for employment, notices setting forth the substance of this clause.

## **14. Contingent Fee Prohibition**

The Master Contractor warrants that it has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency working for the Master Contractor to solicit or secure this Master Contract, and that it has not paid or agreed to pay any person, partnership, corporation or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson or commercial selling agency, any fee or other consideration contingent on the making of this Master Contract.

## **15. Non-availability of Funding**

If the General Assembly fails to appropriate funds or if funds are not otherwise made available for continued performance for any fiscal period of a PO under this Master Contract succeeding the first fiscal period, the PO shall be canceled automatically as of the beginning of the fiscal year for

which funds were not appropriated or otherwise made available; provided, however, that this will not affect either the State's rights or the Master Contractor's rights under any termination clause in this Master Contract. The effect of termination of the PO hereunder will be to discharge both the Master Contractor and the State from future performance of the PO, but not from their rights and obligations existing at the time of termination. The Master Contractor shall be reimbursed for the reasonable value of any nonrecurring costs incurred but not amortized in the price of the PO. The State shall notify the Master Contractor as soon as it has knowledge that funds may not be available for the continuation of the PO for each succeeding fiscal period beyond the first.

#### **16. Termination for Cause**

If the Master Contractor fails to fulfill its obligations under this Master Contract properly and on time, or otherwise violates any provision of the Master Contract, the State may terminate the Master Contract by written notice to the Master Contractor. The notice shall specify the acts or omissions relied upon as cause for termination. All finished or unfinished work provided by the Master Contractor shall, at the State's option, become the State's property. The State shall pay the Master Contractor fair and equitable compensation for satisfactory performance prior to receipt of notice of termination, less the amount of damages caused by the Master Contractor's breach. If the damages are more than the compensation payable to the Master Contractor, the Master Contractor will remain liable after termination and the State can affirmatively collect damages. Termination hereunder, including the termination of the rights and obligations of the parties, shall be governed by the provisions of COMAR 21.07.01.11B.

#### **17. Termination for Convenience**

The performance of work under this Master Contract may be terminated by the State in accordance with this clause in whole, or from time to time in part, whenever the State shall determine that such termination is in the best interest of the State. The State will pay all reasonable costs associated with this Master Contract that the Master Contractor has incurred up to the date of termination, and all reasonable costs associated with termination of the Master Contract; provided, however, the Master Contractor shall not be reimbursed for any anticipatory profits that have not been earned up to the date of termination. Termination hereunder, including the determination of the rights and obligations of the parties, shall be governed by the provisions of COMAR 21.07.01.12 (A) (2).

#### **18. Delays and Extensions of Time**

The Master Contractor agrees to perform the work under this Master Contract continuously and diligently. No charges or claims for damages shall be made by the Master Contractor for any delays or hindrances from any cause whatsoever during the progress of any portion of the work specified in this Master Contract. Time extensions will be granted only for excusable delays that arise from unforeseeable causes beyond the control and without the fault or negligence of the Master Contractor, including but not restricted to acts of God, acts of the public enemy, acts of the State in either its sovereign or contractual capacity, acts of another contractor in the performance of a contract with the State, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, or delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of either the Master Contractor or the subcontractors or suppliers.

**19. Suspension of Work**

The State unilaterally may order the Master Contractor in writing to suspend, delay, or interrupt all or any part of its performance for such period of time as the Procurement Officer or Contract Manager may determine to be appropriate for the convenience of the State.

**20. Pre-Existing Regulations**

In accordance with the provisions of Section 11-206 of the State Finance and Procurement Article, Annotated Code of Maryland, the regulations set forth in Title 21 of the Code of Maryland Regulations (COMAR 21) in effect on the date of execution of this Master Contract are applicable to this Master Contract.

**21. Financial Disclosure**

The Master Contractor shall comply with the provisions of Section 13-221 of the State Finance and Procurement Article of the Annotated Code of Maryland, which requires that every business that enters into contracts, leases, or other agreement with the State or its agencies during a calendar year under which the business is to receive in the aggregate \$100,000 or more, shall within 30 days of the time when the aggregate value of these contracts, leases or other agreements reaches \$100,000, file with the Secretary of the State certain specified information to include disclosure of beneficial ownership of the business.

**22. Political Contribution Disclosure**

The Master Contractor shall comply with the Election Law Article, Sections 14-101 through 14-108, of the Annotated Code of Maryland, which requires that every person that enters into contracts, leases, or other agreements with the State, a county or an incorporated municipality or their agencies, during a calendar year under which the person receives in the aggregate \$100,000 or more, shall file with the State Board of Elections a statement disclosing contributions in excess of \$500 made during the reporting period to a candidate for elective office in any primary or general election. The statement shall be filed with the State Board of Elections: (1) before a purchase or execution of a lease or contract by the State, a county, an incorporated municipality, or their agencies, and shall cover the preceding two calendar years; and (2) if the contribution is made after the execution of a lease or contract, then twice a year, throughout the contract term, on: (a) February 5, to cover the 6-month period ending January 31; and (b) August 5, to cover the 6-month period ending July 31.

**23. Retention of Records**

The Master Contractor shall retain and maintain all records and documents in any way relating to this Master Contract for three years after final payment by the State under this Master Contract or any applicable statute of limitations, whichever is longer, and shall make them available for inspection and audit by authorized representatives of the State, including by way of example only, the Procurement Officer or the Procurement Officer's designee, and the Contract Manager or the Contract Manager's designee, at all reasonable times. All records related in any way to the Master Contract are to be retained for the entire time provided under this section. The Master Contractor

shall, upon request by the State, surrender all and every copy of documents needed by the State, including, but not limited to itemized billing documentation containing the dates, hours spent and work performed by the Master Contractor and its subcontractors under the Master Contract. The Master Contractor agrees to cooperate fully in any audit conducted by or on behalf of the State, including, by way of example only, making records and employees available as, where, and to the extent reasonably requested by the State and by assisting the auditors in reconciling any audit variances. Master Contractor shall not be compensated for providing any such cooperation and assistance. This section shall survive expiration of this Master Contract.

#### **24. Compliance with Laws**

The Master Contractor hereby represents and warrants that:

24.1. It is qualified to do business in the State of Maryland and that it will take such action as, from time to time hereafter, may be necessary to remain so qualified;

24.2. It is not in arrears with respect to the payment of any monies due and owing the State of Maryland, or any department or unit thereof, including but not limited to the payment of taxes and employee benefits, and that it shall not become so in arrears during the term of this Master Contract;

24.3. It shall comply with all federal, State and local laws, regulations, and ordinances applicable to its activities and obligations under this Master Contract; and

24.4. It shall obtain, at its expense, all licenses, permits, insurance, and governmental approvals, if any, necessary to the performance of its obligations under this Master Contract.

#### **25. Costs and Price Certification**

By submitting cost or price information, the Master Contractor certifies to the best of its knowledge that the information submitted is accurate, complete, and current as of the date of the price proposal. The price under this Master Contract and any change order or modification hereunder, including profit or fee, shall be adjusted to exclude any significant price increases occurring because the Master Contractor furnished cost or price information which, as of the date of the financial proposal, was inaccurate, incomplete, or not current.

#### **26. Subcontracting; Assignment**

The Master Contractor may not subcontract any portion of the services provided under this Master Contract without obtaining the prior written approval of the Procurement Officer (which approval shall not be unreasonably withheld), nor may the Master Contractor assign this Master Contract or any of its rights or obligations hereunder, without the prior written approval of the Procurement Officer, any such approvals to be in the State's sole and absolute subjective discretion; provided however, a Master Contractor may assign monies receivable under a PO after due notice to the State. The State shall not be responsible for the fulfillment of the Master Contractor's obligations to the subcontractors.

**27. Indemnification**

27.1. The Master Contractor shall hold harmless and indemnify the State against liability for any costs, expenses, loss, suits, actions, or claims of any character arising from or relating to the performance of the Master Contractor or its subcontractors under this Master Contract.

27.2. The State has no obligation to provide legal counsel or defense to the Master Contractor or its subcontractors in the event that a suit, claim or action of any character is brought by any person not party to this Master Contract against the Master Contractor or its subcontractors as a result of or relating to the Master Contractor's obligations under this Master Contract.

27.3. The State has no obligation for the payment of any judgments or the settlement of any claims against the Master Contractor or its subcontractors as a result of or relating to the Master Contractor's obligations under this Master Contract.

27.4. The Master Contractor shall immediately notify the Procurement Officer of any claim or suit made or filed against the Master Contractor or its subcontractors regarding any matter resulting from or relating to the Master Contractor's obligations under the Master Contract. In the event that a claim, suit or action is made or filed against the State as a result of or relating to the Master Contractor's performance under this Master Contract, the Master Contractor agrees to assume the defense of any and all such suits and pay the costs and expenses incidental hereto, subject to the right of the State to provide additional legal counsel at the State's own expense. This section shall survive expiration of this Master Contract.

**28. Limitation of Liability**

For breach of this Master Contract, negligence, misrepresentation or any other contract or tort claim, Master Contractor shall be liable as follows:

A. For infringement of patents, trademarks, trade secrets and copyrights as provided in Section 6 ("Patents, Copyrights, Intellectual Property") of this Master Contract;

B. Without limitation for damages for bodily injury (including death) and damage to real property and tangible personal property arising out Contractor's acts or omissions;

C. For all other claims, damages, loss, costs, expenses, suits or actions in any way related to this Master Contract, regardless of the form, Master Contractor's liability per claim shall not exceed five (5) times the total amount of the PORFP out of which the claim arises; provided however, the State may, in its sole discretion, decrease the ceiling established hereunder in any PORFP issued pursuant to this RFP. Third party claims arising under Section 27 ("Indemnification") of this Master Contract are included in this limitation of liability only if the State is immune from liability. Master Contractor's liability for third party claims arising under Section 27 of this Master Contract shall be unlimited if the State is not immune from liability for claims arising under Section 27.

**29. Administrative**

29.1. Procurement Officer. The work to be accomplished under this Master Contract shall be performed under the direction of the Procurement Officer and Contract Manager. All matters

relating to the interpretation of this Master Contract shall be referred to the Procurement Officer for determination.

29.2. Notices. All notices hereunder shall be in writing and either delivered personally or sent by certified or registered mail, postage prepaid as follows:

If to the State:

Dapheny McCray  
Maryland Department of Information Technology  
100 Community Place  
Crownsville, Maryland 21032  
[Dapheny.mccray1@maryland.gov](mailto:Dapheny.mccray1@maryland.gov)

If to the Master Contractor:

Vice President of Sales Operations (Comcast Business)  
One Comcast Center  
1701 JFK Blvd.  
Philadelphia, PA 19103

With a copy to:

Cable Law Department  
One Comcast Center, 50th Floor  
1701 JFK Blvd.  
Philadelphia, PA 19103

**30. Risk of Loss; Transfer of Title.**

Risk of loss for conforming supplies, equipment and materials specified as deliverables to the State hereunder shall remain with the Master Contractor until the supplies, equipment, materials and other deliverables are received by the State. Title of all such deliverables passes to the State upon receipt by the State, subject to the State's acceptance and payment for the same in accordance with the terms of this Master Contract.

**31. RESERVED**

**32. Commercial Nondiscrimination**

A. As a condition of entering into this Master Contract, Master Contractor represents and warrants that it will comply with the State's Commercial Nondiscrimination Policy, as described under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland.

As part of such compliance, Master Contractor may not discriminate on the basis of race, color, religion, ancestry or national origin, sex, age, marital status, sexual orientation, or on the basis of disability or other unlawful forms of discrimination in the solicitation, selection, hiring, or commercial treatment of subcontractors, vendors, suppliers, or commercial customers, nor shall Master Contractor retaliate against any person for reporting instances of such discrimination. Master Contractor shall provide equal opportunity for subcontractors, vendors, and suppliers to participate in all of its public sector and private sector subcontracting and supply opportunities, provided that this clause does not prohibit or limit lawful efforts to remedy the effects of marketplace discrimination that have occurred or are occurring in the marketplace. Master Contractor understands that a material violation of this clause shall be considered a material breach of this Master Contract and may result in termination of this Master Contract, disqualification of Master Contractor from participating in State contracts, or other sanctions. This clause is not enforceable by or for the benefit of, and creates no obligation to, any third party.

B. The Master Contractor shall include the above Commercial Nondiscrimination clause, or similar clause, in all subcontracts.

C. As a condition of entering into this Master Contract, upon the Maryland Human Relations Commission's request, and only after the filing of a complaint against Master Contractor under Title 19 of the State Finance and Procurement Article, Master Contractor agrees to provide within 60 days after the request a complete list of the names of all subcontractors, vendors, and suppliers that Master Contractor has used in the past 4 years on any of its contracts that were undertaken within the State, including the total dollar amount paid by Master Contractor on each subcontract or supply contract. Master Contractor further agrees to cooperate in any investigation conducted by the State pursuant to the State's Commercial Nondiscrimination Policy as set forth under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland, and to provide any documents relevant to any investigation that is requested by the State. Master Contractor understands that violation of this clause is a material breach of this Master Contract and may result in contract termination, disqualification by the State from participating in State contracts, and other sanctions.

### **33. Prompt Pay Requirements**

33.1. If a Master Contractor withholds payment of an undisputed amount to its subcontractor, the Agency, at its option and in its sole discretion, may take one or more of the following actions:

33.1.1. Not process further payments to the Master Contractor until payment to the subcontractor is verified

33.1.2. Suspend all or some of the contract work without affecting the completion date(s) for the contract work;

33.1.3. Pay or cause payment of the undisputed amount to the subcontractor from monies otherwise due or that may become due;

33.1.4. Place a payment for an undisputed amount in an interest-bearing escrow account; or

33.1.5. Take other or further actions as appropriate to resolve the withheld payment.

33.2. An “undisputed amount” means an amount owed by a contractor to a subcontractor for which there is no good faith dispute. Such “undisputed amounts” include (a) retainage which had been withheld and is, by the terms of the agreement between the contractor and subcontractor, due to be distributed to the subcontractor and (b) an amount withheld because of issues arising out of an agreement or occurrence unrelated to the agreement under which the amount is withheld.

33.3. An act, failure to act, or decision of a procurement officer or a representative of the Agency, concerning a withheld payment between a contractor and subcontractor under this policy directive, may not:

33.3.1. Affect the rights of the contracting parties under any other provision of law;

33.3.2. Be used as evidence on the merits of a dispute between the Agency and the contractor in any other proceeding; or

33.3.3. Result in liability against or prejudice the rights of the Agency.

33.4. The remedies enumerated above are in addition to those provided under COMAR 21.11.03.13 with respect to subcontractors that have contracted pursuant to the Minority Business Enterprise program.

33.5. To ensure compliance with certified MBE subcontract participation goals, the Agency may, consistent with COMAR 21.11.03.13, take the following measures:

33.5.1. Verify that the certified MBEs listed in the MBE participation schedule actually are performing work and receiving compensation as set forth in the MBE participation schedule.

33.5.2. This verification may include, as appropriate:

33.5.2.1. Inspecting any relevant records of the contractor;

33.5.2.2. Inspecting the jobsite; and

33.5.2.3. Interviewing subcontractors and workers.

33.5.2.4. Verification shall include a review of:

33.5.2.4.1. The contractor’s monthly report listing unpaid invoices over 30 days old from certified MBE subcontractors and the reason for nonpayment; and

33.5.2.4.2. The monthly report of each certified MBE subcontractor, which lists payments received from the contractor in the preceding 30 days and invoices for which the subcontractor has not been paid.

33.6. If the Agency determines that a contractor is in noncompliance with certified MBE participation goals, then the Agency will notify the contractor in writing of its findings, and will

require the contractor to take appropriate corrective action. Corrective action may include, but is not limited to, requiring the contractor to compensate the MBE for work performed as set forth in the MBE participation schedule.

33.6.1. If the Agency determines that a contractor is in material noncompliance with MBE contract provisions and refuses or fails to take the corrective action that the Agency requires, then the Agency may:

33.6.2. Terminate the contract;

33.6.3. Refer the matter to the Office of the Attorney General for appropriate action; or

33.6.4. Initiate any other specific remedy identified by the contract, including the contractual remedies required by this Directive regarding the payment of undisputed amounts.

33.6.5. Upon completion of the contract, but before final payment or release of retainage or both, the contractor shall submit a final report, in affidavit form under the penalty of perjury, of all payments made to, or withheld from MBE subcontractors.

**34. RESERVED**

**35. Living Wage**

If a Contractor subject to the Living Wage law fails to submit all records required under COMAR 21.11.10.05 to the Commissioner of Labor and Industry at the Department of Labor, Licensing and Regulation, the agency may withhold payment of any invoice or retainage. The agency may require certification from the Commissioner on a quarterly basis that such records were properly submitted.

**36. Insurance**

The parties acknowledge and agree that, subject to this Section 36, Master Contractor's insurance obligations are set forth in Section 2.13 of the RFP. The parties acknowledge and agree that:

(a) Section 2.13.1 of the RFP is hereby amended to read as follows:

“The Master Contractor shall maintain liability insurance with the minimum limits required herein”

(b) Section 2.13.2 of the RFP is hereby amended to read as follows:

“The Master Contractor shall maintain a policy of general liability insurance that is written on an ISO form or equivalent and with limits as required under Section 2.13.5 below”

(c) Section 2.13.10 of the RFP is hereby amended to read as follows:

“In the event the State receives a notice of cancellation, the Master Contractor shall provide the State with an alternate comparable insurance policy in accordance with Section 2.13.10

from another carrier prior to the expiration of the insurance policy then in effect if the cancellation was due to the end of the policy term, and within thirty (30) days of notice of cancellation with coverage starting on or before the date of cancellation, if the cancellation was due to any other reason.

*[Signature Page Follows]*

IN WITNESS THEREOF, the parties have executed this Master Contract as of the date hereinabove set forth.

MASTER CONTRACTOR

DocuSigned by: Daniel J. Carr 3/13/2020  
6EBFD127E5604F8  
By Daniel J. Carr VP Sales operations Date

Witness/Attest: DocuSigned by: Julio Paternostro  
1193371F0E3A455...

DEPARTMENT OF INFORMATION TECHNOLOGY

DocuSigned by: Michael G. Leahy 04/23/2020  
78280075CBE64C5...  
By Date

Witness: Daphney McCray

Approved for form and legal sufficiency this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

Howard J. Barr Digitally signed by Howard J. Barr Date: 2020.03.16 10:53:16 -04'00'

Assistant Attorney General

APPROVED BY BPW: \_\_\_\_\_  
(Date) (BPW Item #)

Exhibit A

RFP

*See attachment entitled "Exhibit A – Request for Proposal No. F50B4400028"*



**EXPANSION WINDOW NOTIFICATION**

March 30, 2018

Subject: Data Telecommunications Services – Expansion Window #1, RFP #F50B4400028

Dear Potential Offerors:

The Department of Information Technology (DoIT) invites you to participate in the first expansion window for the Data Telecommunications Services Master Contract. Attached to this notification is the RFP for the Data Telecommunications Services Expansion Window #1, RFP #F50B4400028. The RFP and attachments can also be downloaded from DoIT's bid board located at:

<http://doit.maryland.gov/contracts/Pages/bids.aspx>.

In addition, for information regarding the Data Telecommunications Services Master Contract, you can visit DoIT's web site located at:

<http://doit.maryland.gov/contracts/Pages/DataTelecommHome.aspx>.

**Please note that a new functional area, Functional Area IV - Commodity Internet Service Delivery, has been added to the RFP.**

Should you have any question, please contact the Procurement Officer listed in the Key Information Summary Sheet.

Thank you and we look forward to your interest.

## Request for Proposals (RFP)



Department of Information Technology (DoIT)

DATA TELECOMMUNICATIONS SERVICES

Expansion Window #1

PROJECT NO. F50B4400028

ISSUE DATE: March 30, 2018

### NOTICE

Prospective Offerors who have received this document from the Department of Information Technology's website or eMaryland Marketplace.com, or who have received this document from a source other than the Procurement Officer, and who wish to assure receipt of any changes or additional materials related to this RFP, should immediately contact the Procurement Officer and provide their name and mailing address so that amendments to the RFP or other communications can be sent to them.

**Minority Business Enterprises are encouraged to respond to this Solicitation**

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## State of Maryland

### NOTICE TO OFFERORS/CONTRACTORS

In order to help us improve the quality of State proposal solicitations, and to make our procurement process more responsive and business friendly, we ask that you take a few minutes and provide comments and suggestions regarding the enclosed solicitation. Please return your comments with your proposal. If you have chosen not to propose on this Request for Proposals, please email this completed form to the Procurement Officer's email address.

Title: Data Telecommunications Services

Project No: F50B4400028 – Expansion Window #1

1. If you have responded with a "no bid", please indicate the reason(s) below:

- Other commitments preclude our participation at this time.
- The subject of the solicitation is not something we ordinarily provide.
- We are inexperienced in the work/commodities required.
- Specifications are unclear, too restrictive, etc. (Explain in REMARKS section.)
- The scope of work is beyond our present capacity.
- Doing business with Maryland Government is simply too complicated. (Explain in REMARKS section.)
- We cannot be competitive. (Explain in REMARKS section.)
- Time allotted for completion of the proposal is insufficient.
- Start-up time is insufficient.
- Bonding/Insurance requirements are restrictive. (Explain in REMARKS section.)
- Proposals requirements (other than specifications) are unreasonable or too risky. (Explain in REMARKS section.)
- MBE requirements. (Explain in REMARKS section.)
- Prior State of Maryland Contract experience was unprofitable or otherwise unsatisfactory. (Explain in REMARKS section.)
- Payment schedule too slow

Other: \_\_\_\_\_

2. If you have submitted a proposal, but wish to offer suggestions or express concerns, please use the Remarks section below. (Use reverse side or attach additional pages as needed.)

REMARKS:

\_\_\_\_\_  
\_\_\_\_\_

Offeror Name: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Phone (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

**Data Telecom Services Expansion Window**  
**Solicitation #: 060B8400065**

**RFP Document**

## KEY INFORMATION SUMMARY SHEET

|                               |   |
|-------------------------------|---|
| RFP Title:                    | Data Telecommunications Services  |
| RFP Number:                   | F50B4400028 – Expansion Window #1   |
| RFP Issue Date:               | <b>March 30, 2018</b>   |
| Closing Date and Time:        | <b>April 24, 2018 at 2:00 PM Local Time</b>   |
| RFP Requesting Agency:        | Department of Information Technology (DoIT)   |
| Send Questions:               | Email only to:<br>Dapheny.mccray1@maryland.gov  |
| Questions Due Date and Time:  | <b>April 16, 2018 at 5:00 PM Local Time</b>   |
| Procurement Officer:          | Dapheny McCray<br>Office Phone Number: 410-697-9671<br>Email: <a href="mailto:dapheny.mccray1@maryland.gov">dapheny.mccray1@maryland.gov</a>  |
| Contract Manager:             | David Mangrum<br>Director - Networks<br>100 Community Place<br>Crownsville, MD 20132<br>Office Phone Number: 410-697-9393<br>E-mail: <a href="mailto:david.mangrum@maryland.gov">david.mangrum@maryland.gov</a> |
| Proposals are to be sent to:  | Dapheny McCray<br>100 Community Place<br>Crownsville, MD 20132<br>Email: <a href="mailto:dapheny.mccray1@maryland.gov">dapheny.mccray1@maryland.gov</a>   |
| Type:                         | Indefinite Quantity Contract with Firm Fixed Unit Price   |
| Contract Duration             | Approximately 9 years   |
| MBE Goal:                     | 0%  |
| VSBE                          | 0%  |
| Small Business Reserve (SBR): | No  |
| Pre-proposal Conference:      | <b>April 17, 2018; 11:00 am</b><br><b>See Attachment 8 for directions</b>   |

## **SECTION 1 - GENERAL INFORMATION**

### **1.1 SUMMARY STATEMENT**

- 1.1.1 DoIT is issuing this RFP to procure Data Services (DS) for Wide Band Digital Data Services (DDS), Wireless Access, and Last Mile Access to support the data telecommunications needs of the State of Maryland. The Master Contract resulting from this RFP will provide DoIT with the flexibility of obtaining data telecommunications services quickly and efficiently by issuing Purchase Order Requests for Proposals (PORFP) for specific services.
- 1.1.2 The State intends to award multiple offerors on this Master Contract. Offerors are invited to submit proposals on all or individual Functional Areas (Section 1.1.3) in all or individual LATAs (Section 1.1.4) within the State of Maryland. Proposals shall be submitted to the State as one offering. Awards shall be made to all qualified offerors able to provide the required levels of service for one or more of the defined Functional Areas, per one or more LATA, for the contract period based upon the evaluation criteria detailed in Section 4. The State may award multiple contracts for each Functional Area/LATA.
- 1.1.3 The scope of this solicitation encompasses the following four Functional Areas:
- Functional Area I – Wide Band DDS
  - Functional Area II – Wireless Access Data Services
  - Functional Area III – Last Mile Access Data Services
  - Functional Area IV – Commodity Internet Service Delivery
- 1.1.4 The State provides data services to Maryland's four LATAs.
- LATA 236 Washington
  - LATA 238 Baltimore
  - LATA 240 Hagerstown
  - LATA 242 Salisbury
- 1.1.5 The scope of the Master Contract resulting from this RFP includes interstate data services where a circuit terminates outside of a Maryland LATA. Please see Attachment 15 for a current list of locations outside of the State that are within the scope of this RFP. This list is not intended to restrict future out-of-state locations.
- 1.1.6 It is the State's intention to obtain services, as specified in this RFP, from contracts between the selected offerors and the State. It is also the State's intention to transition the State's existing embedded base of high capacity and local access circuits to the selected Master Contractors as deemed financially advantageous to the State under this RFP during the period of the Master Contract. Identified transitions shall occur on a schedule determined by the State, and shall occur through the issuance of a PORFP.
- 1.1.7 Each request for data telecommunications services throughout the term of the Master Contract will be issued and summarized by DoIT in a PORFP. A Master Contractor

Matrix for each Functional Area will be established and maintained by DoIT. All offerors awarded a Master Contract for the Functional Area and LATA for which a PORFP has been issued will be invited to compete for the award. Based upon PORFPs issued by the State of Maryland, a Master Contractor will be selected to provide the requested services. A Purchase Order (PO) will then be issued by DoIT to the selected Master Contractor, which will bind the Master Contractor to the terms of the PORFP response, including the price. Neither a PORFP, nor a PO, may, in any way, conflict with or supersede the Master Contract.

- 1.1.8 The State makes no guarantee that it will purchase any service from any resulting master contract. This Master Contract will not be construed to require the State to procure exclusively from the Master Contractor(s). The State reserves the right to procure goods and services from other sources when it is in the best interest of the State to do so and without notice to the Master Contractor.
- 1.1.9 Offerors may provide required services as a reseller or provide services directly from their facilities.
- 1.1.10 Offerors will not use the State's private network to provide any services listed within this RFP.

## 1.2 ABBREVIATIONS AND DEFINITIONS

For purposes of this RFP, the following abbreviations or terms have the meanings indicated below.

Acronyms defined in this section will not be further defined within this RFP.

|                         |   |
|-------------------------|---|
| <b>Agency</b>           | The unit of the Maryland State government requiring equipment and services through the PORFP issued by DoIT.  |
| <b>APN</b>              | Access Point Name   |
| <b>BER</b>              | Bit Error Rate. The percentage of received bits in error compared to the total number of bits received  |
| <b>CFM</b>              | Connectivity Fault Management   |
| <b>CIR</b>              | Committed Information Rate. The level of data traffic that the carrier agrees to handle over a period of time   |
| <b>COMAR</b>            | Code of Maryland Regulations, available on-line at <a href="http://www.dsd.state.md.us">www.dsd.state.md.us</a>   |
| <b>Contract Manager</b> | The State representative who serves as the manager for the resulting Master Contract. The Contract Manager monitors the daily activities of the Master Contract and provides guidance to Master Contractors |
| <b>CPE</b>              | Customer Premise Equipment. Equipment connected to the network residing on customer's premises  |
| <b>DHCP</b>             | Dynamic Host Configuration Protocol   |
| <b>DS-3</b>             | Digital Signal level 3 T-carrier  |
| <b>DSCP</b>             | Differentiated Services Code Point  |
| <b>DOCSIS</b>           | Data Over Cable Service Interface Specification   |
| <b>DoIT</b>             | Maryland Department of Information Technology, the agency that has sole authority to issue PORFPs under the resulting Master Contract.  |

**Data Telecom Services Expansion Window**  
**Solicitation #: 060B8400065**

**RFP Document**

|   |  |
|---|--|
| <b>DSL</b>  | Digital Subscriber Line  |
| <b>Expansion Window</b>                           | A specific period of time during the Master Contract period during which DoIT will accept proposals from companies seeking to be added to the Master Contract and from Master Contractors wishing to add Functional Areas or LATAs.  |
| <b>EVC</b>  | Ethernet Virtual Circuits  |
| <b>Functional Area</b>                            | For the purposes of this procurement, defined as a grouping of services into specific categories as defined by DoIT.   |
| <b>Interoperability</b>                           | For the purposes of this procurement, defined as the ability of each service contractor to effectively and efficiently transfer all information and control data within its own network, and between its network and those of other service providers, so that a given service operates transparently and without performance degradation. |
| <b>IPSEC</b>                                      | Internet Protocol Security   |
| <b>IXC</b>  | Interexchange Carrier. Carrier authorized by the FCC to provide IXC services in the State  |
| <b>LAN</b>  | Local Area Network   |
| <b>Last Mile Access</b>                           | Final leg of connection between the network provider and the retail customer   |
| <b>LATA</b>                                       | Local Access and Transport Area. Geographical area within which a carrier may offer data telecommunications services   |
| <b>LEC</b>  | Local Exchange Carrier. Carrier authorized by the State of Maryland Public Service Commission to provide local service in a State of Maryland LATA   |
| <b>Local Loops</b>                                | The physical connection from the State's premise to a carrier's point-of-presence  |
| <b>Local Time</b>                                 | Time in the Eastern Time Zone as observed by the State of Maryland   |
| <b>Master Contract</b>                            | The contract that will be awarded as a result of this RFP. The Master Contract will be in the form of Attachment 2.  |
| <b>Master Contractor (MC)</b>                     | An Offeror who is awarded a Master Contract under this RFP   |
| <b>Master Contractor's Contract Administrator</b> | Person designated as the single point-of-contact in the Offeror's Proposal with the authority and knowledge to resolve customer complaints that are not solely technical in nature on behalf of the Master Contractor  |
| <b>MEF</b>  | Metro Ethernet Forum   |
| <b>MPLS</b>                                       | Multiprotocol Label Switching  |
| <b>MTU</b>  | Maximum Transmission Unit  |
| <b>NID</b>  | Network Interface Device   |
| <b>OAM</b>  | Operations, Administration, and Maintenance  |
| <b>OC-3 (Optical Carrier 3)</b>                   | Network line with transmission data rate of up to 155.52 Mbit/s  |
| <b>OC-12 (Optical Carrier 12)</b>                 | Network line with transmission speeds of up to 622.08 Mbit/s   |
| <b>OCC</b>  | Other Common Carrier   |

**Data Telecom Services Expansion Window**  
**Solicitation #: 060B8400065**

**RFP Document**

|   |  |
|---|--|
| <b>Offeror</b>                                      | An entity that submits a proposal in response to this RFP  |
| <b>On-Net List</b>                                  | List detailing the building locations and services provided to those locations by a given service provider.  |
| <b>PDU</b>  | Protocol Data Unit   |
| <b>POC</b>  | Point of Contact   |
| <b>Procurement Officer</b>                          | The State representative responsible for this RFP, for the determination of contract scope issues, and the only State representative who can authorize changes to the resulting Master Contract  |
| <b>Purchase Order (PO)</b>                          | Once signed by the State, a binding agreement between the State and the Master Contractor for items or services identified at the specified price  |
| <b>Purchase Order Contractor (PO Contractor)</b>    | A Master Contractor that has been awarded a PO for a specific PORFP  |
| <b>PORFP Procurement Officer</b>                    | The Procurement Officer identified in the PORFP who has the sole responsibility for the management of the PORFP process, issuing of any PO that may result from the PORFP, for the resolution of PO scope issues, and for authorizing any changes to the PO  |
| <b>Purchase Order Proposal (PO Proposal)</b>        | The technical and financial response by a Master Contractor to a PORFP   |
| <b>Purchase Order Request for Proposals (PORFP)</b> | A solicitation document that describes all specifics regarding the technical specifications, performance characteristics, and service levels as required by the State for a given solicitation of data telecommunications equipment and services under the Data Telecommunications Services Master Contract  |
| <b>QoS</b>  | Quality of Service   |
| <b>Request for Proposal (RFP)</b>                   | This Request for Proposals for the Maryland DoIT, including any amendments   |
| <b>Service Order</b>                                | Work order generated by the Master Contractor to complete a task associated with a Purchase Order  |
| <b>SIM</b>  | Subscriber Identity Module   |
| <b>SLA</b>  | Service Level Agreement  |
| <b>State of Maryland Business Hours</b>             | 8:00 A.M. to 5:00 P.M., local time, Monday – Friday, excluding State holidays  |
| <b>State POC</b>                                    | Point of Contact designated by the State in a PORFP  |
| <b>Stratum Three Clock</b>                          | A source of network timing: accuracy 1ppm, stability 10ppb/Day, Pull-in-Range 4.6ppm, and *Time to first Frame Slip 3.5 Hours.<br><br>* To calculate slip rate from drift, one assumes a frequency offset equal to the above drift in 24 hours, which accumulates bit slips until 193 bits have been accumulated. Drift rates for various atomic and crystal oscillators are not usually linear or not necessarily continually increasing. |

|  |   |
|--|---|
| <b>Surcharges</b>                            | A surcharge the Offeror plans to charge the State for the services requested in the scope of work and included in the Financial Proposals. A Surcharge shall only be billed if explicitly priced in the Contract. A fee is a type of surcharge. |
| <b>Tariff</b>                                | An open contract between a telecommunications service provider and the public, filed with an appropriate regulating body. Tariffs contain the rates, terms and conditions of certain services provided by telecommunications carriers           |
| <b>Taxes</b>                                 | A tax the Offeror plans to charge the State for the services requested in the scope of work and included in the Financial Proposals. A tax shall only be billed if explicitly priced in the Contract.   |
| <b>Termination Date</b>                      | The date the State selects for termination of a service   |
| <b>UNI</b>                                   | User Network Interface  |
| <b>VLAN</b>                                  | Virtual Local Access Network  |
| <b>VPN</b>                                   | Virtual Private Network   |
| <b>VRF</b>                                   | Virtual Routing and Forwarding  |
| <b>Wide-Band Digital Data Services (DDS)</b> | Transmission facility greater than T-1; Wideband is a transmission medium or channel that has a wider bandwidth than one voice channel (with a carrier wave of a certain modulated frequency).  |

### 1.3 MASTER CONTRACT TYPE

The Master Contract resulting from this RFP shall be a Fixed-Unit Price, Indefinite Quantity Contract in accordance with COMAR 21.06.03.02 and 21.06.03.06. Fixed Price (FP) PORFPs will be issued under the Master Contract as described in each respective PORFP, as appropriate to the type of products and/or services requested.

### 1.4 MASTER CONTRACT DURATION

The term of this Master Contract shall be for a period of approximately nine years. At the State's discretion, and at intervals to be determined, DoIT will announce additional Expansion Windows during which new offerors may propose to become Master Contractors. Further, during an announced Expansion Window, DoIT will allow existing Master Contractors to propose to add Functional Areas/LATAs to their Master Contracts.

### 1.5 PRICING FOR CONTRACT/CONTRACT MODIFICATIONS

The rates for services will remain the same or lower through the entire term, including renewals, of the Master Contract. Master Contractors may grant a concession to the State and lower the rates at any time during the Master Contract by submitting revised service rates to the Procurement Officer. Rates for any contract modification shall be the same or lower than the rates established in a Master Contractor's tariff, if a tariff exists.

#### 1.5.1 Most Favored Customer

When submitting prices under a PORFP, the Contractor shall provide the most favored customer price or lower.

To provide ongoing competitive prices to users of this contract, each Master Contractor shall ensure that the State shall receive favorable rates during the term of this Master Contract. The rates set forth shall not exceed the Master Contractor's commercial price list, its established tariff, or rates being provided to its largest service customers. If at any time this should occur, the Master Contractor shall immediately notify the contracting office and offer the lower prices for incorporation into this Master Contract.

#### 1.5.2 Price Reduction Modifications

For the duration of a PORFP, the Contractor shall provide price reduction modifications as follows.

Master Contractors shall provide to the Procurement Officer all temporary or permanent price reductions, whether the price reduction occurs as a result of changes under Section 1.5.1 or otherwise. The data provided shall include all contract pricing tables, and the effective date(s) of the price reduction, even if the price reduction is retroactive to a date before the date of submission to the Procurement Officer.

### 1.6 PERSONNEL ROLES AND RESPONSIBILITIES

- **Procurement Officer** – The Procurement Officer has the primary responsibility for managing the procurement process resulting in an issued RFP.
- **Contract Manager** - The Contract Manager is responsible for overseeing all of the work required under all Purchase Orders generated from any PORFP.
- **Master Contractor** - One or more Contractors awarded a contract in response to this RFP. The Master Contractors shall provide the necessary resources, personnel, and subcontractors to perform the tasks and meet the RFP objectives in response to awarded PORFPs.
- **Master Contractor Personnel** - Employees and agents and subcontractor employees and agents performing work at the direction of the Master Contractors under the terms of the Master Contract awarded from this RFP.

### 1.7 PROCUREMENT OFFICER

The sole point of contact in the State for purposes of this RFP prior to the award of any Master Contract is the Procurement Officer at the address listed in the Key Information Summary Sheet.

DoIT may change the Procurement Officer at any time by written notice to the Offerors or Master Contractors.

### 1.8 CONTRACT MANAGER

The Contract Manager monitors the daily activities of the Master Contract and provides technical guidance to the Master Contractor. The Contract Manager is listed in the Key Information Summary Sheet.

DoIT may change the Contract Manager at any time by written notice to the Master Contractors.

## **1.9 PRE-PROPOSAL CONFERENCE**

- 1.9.1 A pre-proposal conference will be held at the time, date and location indicated on the Key Information Summary Sheet. Attendance at the pre-proposal conference is not mandatory, but all interested Offerors are encouraged to attend in order to facilitate better preparation of their proposals.
- 1.9.2 Seating at pre-proposal conference will be limited to two (2) attendees per company. Attendees should bring a copy of the RFP and a business card to help facilitate the sign-in process.
- 1.9.3 The pre-proposal conference will be summarized in writing. As promptly as is feasible subsequent to the pre-proposal conference, the attendance record and pre-proposal summary will be distributed via email to all prospective Offerors known to have received a copy of this RFP.
- 1.9.4 In order to assure adequate seating and other accommodations at the pre-proposal conference, please email the Pre-Proposal Conference Response Form (Attachment 7) no later than the time and date indicated on the form. In addition, if there is a need for sign language interpretation and/or other special accommodations due to a disability, please call the Procurement Officer no later than five (5) business days prior to the Pre-Proposal Conference. DoIT will make reasonable efforts to provide such special accommodation.

## **1.10 USE OF eMARYLAND MARKETPLACE (eMM)**

eMM is an electronic commerce system administered by the Maryland Department of General Services. In addition to using the DoIT website [www.DoIT.maryland.gov](http://www.DoIT.maryland.gov) and other means for transmitting the RFP and associated materials, the solicitation and minutes of the pre-proposal conference, Offeror questions and the Procurement Officer's responses, addenda, and other solicitation related information will be provided via eMM.

This means that all such information is immediately available to subscribers to eMM. Because of the instant access afforded by eMM, all Offerors interested in doing business with Maryland State agencies should subscribe to eMM. Furthermore, prior to award of any contract, the apparent awardee shall be registered on eMM. Registration is free. Register at: <https://emaryland.buyspeed.com/bsc/> Click on "Registration" and follow the prompts.

## **1.11 QUESTIONS**

- 1.11.1 All questions shall be submitted via email to the Procurement Officer no later than the date and time indicated in the Key Information Summary Sheet. Answers to all questions that are not clearly specific only to the requestor will be distributed to all vendors who are known to have received a copy of the RFP.

- 1.11.2 Only answers that have been answered in writing by the State can be considered final and binding.

## **1.12 PROPOSAL DUE (CLOSING DATE)**

The Proposal Due Date is indicated in the Key Information Summary Sheet. Requests for extension of this date or time will not be granted. Offerors mailing proposals should allow sufficient mail delivery time to ensure timely receipt by the Procurement Officer. Except as provided in COMAR 21.05.03.02, proposals received by the Procurement Officer after the due date and time will not be considered.

**Proposals may not be submitted by email or facsimile.**

## **1.13 DURATION OF OFFER**

Proposals submitted in response to this RFP are irrevocable for the later of 180 days following the latter of (1) the later of the closing date of proposals or Best and Final Offers (BAFO) (if requested), or (2) the date any protest concerning this RFP is finally resolved. This period may be extended at the Procurement Officer's request only with the Offeror's written agreement.

## **1.14 REVISIONS TO THE RFP**

- 1.14.1 If it becomes necessary to revise this RFP before the due date for proposals, amendments will be provided to all prospective Offerors who were sent this RFP or otherwise are known by the Procurement Officer to have obtained this RFP. In addition, amendments to the RFP will be posted on the DoIT Procurements web page and through e-Maryland-marketplace. Amendments made after the due date for proposals will be sent only to those Offerors who submitted a timely proposal.
- 1.14.2 Acknowledgment of the receipt of all amendments to this RFP issued before the proposal due date shall accompany the Offeror's proposal in the Transmittal Letter accompanying the Technical Proposal submittal. Acknowledgement of the receipt of amendments to the RFP issued after the proposal due date shall be in the manner specified in the amendment notice. Failure to acknowledge receipt of amendments does not relieve the Offeror from complying with all terms of any such amendment.

## **1.15 CANCELLATIONS/DISCUSSIONS**

The State reserves the right to cancel this RFP, accept or reject any and all proposals, in whole or in part, received in response to this RFP, to waive or permit cure of minor irregularities, and to conduct discussions with all qualified or potentially qualified Offerors in any manner necessary to serve the best interests of the State of Maryland. The State also reserves the right, in its sole discretion, to award a Master Contract based upon the written proposals received without prior discussions or negotiations.

## **1.16 ORAL PRESENTATION**

Offerors may be required to make oral presentations to State representatives. Significant representations made by an Offeror during the oral presentation shall be submitted in writing.

All such representations will become part of the Offeror's proposal and are binding if the Master Contract is awarded. The Procurement Officer will notify Offerors of the time and place of oral presentations. Oral presentations typically occur approximately 4-6 weeks after the proposal due date.

#### **1.17 INCURRED EXPENSES**

The State will not be responsible for any costs incurred by an Offeror in preparing and submitting a proposal, in making an oral presentation, in providing a demonstration, or in performing any other activities relative to this solicitation.

#### **1.18 ECONOMY OF PREPARATION**

Proposals should be prepared simply and economically, providing a straightforward, concise description of the Offeror's proposal to meet the requirements of this RFP and should not include marketing material.

#### **1.19 PROTESTS/DISPUTES**

Any protest or dispute related respectively to this solicitation or the resulting Master Contract shall be subject to the provisions of COMAR 21.10 (Administrative and Civil Remedies). Protests or disputes shall only be submitted through hand delivery or delivery via the U.S. Postal Service. Electronic protest or dispute submissions shall not be allowed.

#### **1.20 MULTIPLE OR ALTERNATE PROPOSALS**

Neither multiple nor alternate proposals will be accepted.

#### **1.21 ACCESS TO PUBLIC INFORMATION ACT NOTICE**

An Offeror shall give specific attention to the clear identification of those portions of its proposal that it considers confidential, proprietary commercial information, or trade secrets, and provide justification why such materials, upon request, should not be disclosed by the State under the Public Information Act, Title 10, Subtitle 6, Part III of the State Government Article of the Annotated Code of Maryland.

Offerors are advised that, upon request for this information from a third party, the Procurement Officer is required to make an independent determination whether the information can be disclosed (see COMAR 21.05.08.01).

#### **1.22 OFFEROR RESPONSIBILITIES**

Any selected Offeror shall be responsible for all products and services required by this RFP. Additional information regarding MBE Subcontractors is provided under paragraph 1.26 below. If an Offeror that seeks to perform or provide the services required by this RFP is a subsidiary of another entity, all information submitted by the Offeror, such as, but not limited to, references shall pertain exclusively to the Offeror, unless the parent organization will guarantee the performance of the subsidiary. If applicable, the Offeror's proposal shall contain an explicit statement that the parent organization will guarantee the performance of the subsidiary.

**1.23 MANDATORY CONTRACTUAL TERMS**

By submitting an offer in response to this RFP, an Offeror, if selected for award, shall be deemed to have accepted the terms of this RFP and the Master Contract, attached as Attachment 2. Any exceptions to this RFP or the Master Contract shall be clearly identified in the Executive Summary of the technical proposal. A proposal that takes exception to these terms may be rejected.

**1.24 PROPOSAL AFFIDAVIT**

A proposal submitted by an Offeror shall be accompanied by a completed Bid/Proposal Affidavit. A copy of this Affidavit is included as Attachment 3 of this RFP.

**1.25 CONTRACT AFFIDAVIT**

All Offerors are advised that if a Master Contract is awarded as a result of this solicitation, the successful Offeror will be required to complete a Contract Affidavit. A copy of this Affidavit is included for informational purposes as Attachment 5 of this RFP. This Affidavit shall be signed and provided to DoIT within five (5) business days after notification of proposed Master Contract award.

**1.26 MINORITY BUSINESS ENTERPRISES (MBE)**

For MBE goals and sub-goals information, reference the above Key Information Summary Sheet.

**1.27 VETERANS PREFERENCE**

For VSBE goal information, reference the above Key Information Summary Sheet.

**1.28 ARREARAGES**

By submitting a response to this solicitation, each Offeror represents that it is not in arrears in the payment of any obligations due and owing the State of Maryland, including the payment of taxes and employee benefits, and that it shall not become so in arrears during the term of the Master Contract if selected for Master Contract award.

**1.29 PROCUREMENT METHOD**

This Master Contract will be awarded in accordance with the competitive sealed proposals process under COMAR 21.05.03.

**1.30 VERIFICATION OF REGISTRATION AND TAX PAYMENT**

Before a corporation can do business in the State of Maryland it must be registered with the Department of Assessments and Taxation, State Office Building, Room 803, 301 West Preston Street, Baltimore, Maryland 21201. It is strongly recommended that any potential Offeror complete registration prior to the due date for receipt of proposals. An Offeror's failure to complete registration with the Department of Assessments and Taxation may disqualify an otherwise successful Offeror from final consideration and recommendation for Master Contract award.

### **1.31 FALSE STATEMENTS**

Offerors are advised that section 11-205.1 of the State Finance and Procurement Article of the Annotated Code of Maryland provides as follows:

- (a) In connection with a procurement contract a person may not willfully:
  - Falsify, conceal, or suppress a material fact by any scheme or device;
  - Make a false or fraudulent statement or representation of a material fact; or
  - Use a false writing or document that contains a false or fraudulent statement or entry of a material fact.
- (b) A person may not aid or conspire with another person to commit an act under subsection (a) of this section.
- (c) A person who violates any provision of this section is guilty of a felony and on conviction is subject to a fine not exceeding \$20,000 or imprisonment not exceeding five (5) years or both.

### **1.32 VISUAL AND NON-VISUAL ACCESS**

- 1.32.1 The Offeror warrants that the information technology offered under this proposal (1) provides equivalent access for effective use by both visual and nonvisual means; (2) will present information, including prompts used for interactive communications, in formats intended for both visual and nonvisual use; (3) if intended for use in a network, can be integrated into networks for obtaining, retrieving, and disseminating information used by individuals who are not blind or visually impaired; and (4) is available, whenever possible, without modification for compatibility with software and hardware for nonvisual access. The Offeror further warrants that the cost, if any, of modifying the information technology for compatibility with software and hardware used for nonvisual access will not increase the cost of the information technology by more than 5 percent.
- 1.32.2 For purposes of this Master Contract, the phrase "equivalent access" means the ability to receive, use, and manipulate information and operate controls necessary to access and use information technology by nonvisual means. Examples of equivalent access include keyboard controls used for input and synthesized speech, Braille, or other audible or tactile means used for output.
- 1.32.3 The Non-visual Access Clause noted in COMAR 21.05.08.05 and referenced in this solicitation is the basis for the standards that have been incorporated into the Maryland regulations. See COMAR 14.33.02 online at:  
[http://www.dsd.state.md.us/comar/SubtitleSearch.aspx?search=14.33.02.\\*](http://www.dsd.state.md.us/comar/SubtitleSearch.aspx?search=14.33.02.*)

### **1.33 IRANIAN NON-INVESTMENT**

A proposal submitted by an Offeror shall be accompanied by a Certification Regarding Investments in Iran. A copy of this Certification is included as part of the Bid/Proposal Affidavit, Attachment 3 of this RFP.

**1.34 PAYMENTS BY ELECTRONIC FUNDS TRANSFER**

By submitting a response to this solicitation, the Offeror agrees to accept payments by electronic funds transfer unless the State Comptroller's Office grants an exemption. The selected Offeror shall register using the COT/GAD X-10 Vendor Electronic Funds (EFT) Registration Request Form. Any request for exemption must be submitted to the State Comptroller's Office for approval at the address specified on the COT/GAD X-10 form and must include the business identification information as stated on the form and include the reason for the exemption. The COT/GAC X-10 form can be downloaded at the following URL:

[http://comptroller.marylandtaxes.com/Government\\_Services/State\\_Accounting\\_Information/Static\\_Files/APM/gadx-10.pdf](http://comptroller.marylandtaxes.com/Government_Services/State_Accounting_Information/Static_Files/APM/gadx-10.pdf)

**1.35 PROMPT PAY**

This procurement and the Master Contract to be awarded pursuant to this solicitation are subject to the Prompt Payment Policy Directive issued by the Governor's Office of Minority Affairs dated August 1, 2008. The Directive seeks to ensure the prompt payment of all Subcontractors on non-construction procurement contracts. The successful Offerors who are awarded Master Contracts under this RFP shall comply with the prompt payment requirements outlined in the Master Contract, §33 (see Attachment 2). Additional information is available on the GOMA website at <http://www.oma.state.md.us/>.

**1.36 LIVING WAGE REQUIREMENT**

- 1.36.1 Maryland law requires that contractors meeting certain conditions pay a living wage to covered employees on State service contracts over \$100,000. Maryland Code, State Finance and Procurement, § 18-101 et al. The Commissioner of Labor and Industry at the Department of Labor, Licensing and Regulation requires that a contractor subject to the Living Wage law submit payroll records for covered employees and a signed statement indicating that it paid a living wage to covered employees; or receive a waiver from Living Wage reporting requirements. See COMAR 21.11.10.05.
- 1.36.2 If subject to the Living Wage law, Contractor agrees that it will abide by all Living Wage law requirements, including but not limited to reporting requirements in COMAR 21.11.10.05. Contractor understands that failure of Contractor to provide such documents is a material breach of the terms and conditions and may result in Contract termination, disqualification by the State from participating in State contracts, and other sanctions.
- 1.36.3 The Master Contracts resulting from this solicitation have been deemed to be Tier 1 Contracts.

**1.37 CONFLICT OF INTEREST**

- 1.37.1 Under State Government Article 15-508 of the State ethics laws, a person and their employer who assists or are involved in the drafting of specifications for a procurement are prohibited from submitting a proposal for that procurement, from assisting or

representing another person, directly or indirectly, who is submitting a proposal for that procurement, and from participating in the implementation of those specifications, whether as a prime or Subcontractor. This section of the State Ethics Law may apply to PORFPs issued to Master Contractors under the Data Telecommunications procurement.

- 1.37.2 Offerors shall provide data telecommunications services for State agencies or component programs with those agencies and shall do so impartially and without any conflicts of interest. Offerors shall be required to complete a Conflict of Interest Affidavit with each PO proposal submitted in response to a PORFP. A copy of this Affidavit is included as Attachment 6 of this RFP. If the Procurement Officer makes a determination before award of a PO pursuant to a respective PORFP that facts or circumstances exist that give rise to, or could in the future give rise to, a conflict of interest within the meaning of COMAR 21.05.08.08A, the Procurement Officer may reject a proposal under COMAR 21.06.02.03B
- 1.37.3 By submitting a Conflict of Interest Affidavit and Disclosure, the Master Contractor shall be construed as certifying all personnel and subcontractors are also without a conflict of interest as defined in COMAR 21.05.08.08A.

### **1.38 CONTRACT EXTENDED FOR USERS NOT UNITS OF STATE GOVERNMENT**

For the purposes of an information technology or telecommunications procurement, pursuant to sections 3A-401(b) and 13-110 of the State Finance and Procurement Article of the Annotated Code of Maryland, county, municipal, other State non-executive branch entities, and non-State governments or agencies may purchase from the Master Contractors, goods or services covered by this Master Contract at the same maximum prices to which the State would be subject under the resulting Master Contract. All such purchases:

- Shall constitute Contracts between the Master Contractor and that government or entity;
- For non-State entities, shall not constitute purchases by the State or State agencies under this Master Contract;
- For non-State entities, shall not be binding or enforceable against the State, and
- May be subject to other terms and conditions agreed to by the Master Contractor and the purchaser. Master Contractor bears the risk of determining whether or not a government or agency with which the Master Contractor is dealing is a State entity.

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## SECTION 2 - SCOPE OF WORK

### 2.1 PURPOSE

- 2.1.1 The State is issuing this solicitation for the purposes outlined in Section 1.1 of this RFP.
- 2.1.2 The scope of services contained herein is intended to outline general requirements under this RFP. Specific details of scope, time and budget shall be provided in each individual PORFP.
- 2.1.3 The scope of this solicitation encompasses the following 4 Functional Areas:
- Functional Area I – Wide Band DDS
  - Functional Area II – Wireless Access Data Services
  - Functional Area III – Last Mile Access Data Services
  - Functional Area IV – Commodity Internet Service Delivery
- 2.1.4 Maryland consists of four (4) LATAs:
- LATA 236 Washington
  - LATA 238 Baltimore
  - LATA 240 Hagerstown
  - LATA 242 Salisbury
- 2.1.5 The State operates a high-speed wide area network with equitable access to network services regardless of location for all State agencies. It is comprised of a wide range of network circuits inter-connected to create an information network.

The State has a full range of applications that can benefit from the services specified in this RFP including LAN inter-networking, host-to-terminal cluster communications and host-to-host communications.

The State network utilizes MPLS and QoS protocols to optimize delivery of data, voice, and video across the Wide Area Network, as well as support critical applications that service the State and its citizens.

### 2.2 REQUIREMENTS OVERVIEW

- 2.2.1 Sections 2.3 – 2.7 are based on the State's current technical environment as of the date that this RFP is issued.
- 2.2.2 The current specifications do not preclude the State from requesting additional services should the needs of the State change or should new technologies become available.
- 2.2.3 The Offeror shall demonstrate that it is able to meet the Requirements (Sections 2.3 through 2.7) in **each** Functional Area that it intends to propose, for **each** LATA that it intends to propose.

2.2.4 Each circuit transitioned from the State's embedded base from one vendor to another shall be treated as a new installation and, as such shall be governed by the specifications and terms of the Master Contract to be awarded under this RFP.

2.2.4.1 A State incumbent Contractor for data services circuits awarded a Contract for the same services currently provided shall charge no installation fee for the transition; however, all other requirements in this RFP apply to each transitioned circuit.

2.2.4.2 The selected PO Contractor shall coordinate a timetable with incumbents and the State for transition of the incumbent's portion of the State's embedded base.

### **2.3 TECHNICAL REQUIREMENTS FOR ALL SERVICE TYPES**

2.3.1 The Master Contractor shall describe the SLAs for the following categories:

- Packet loss
- Latency
- Jitter
- Service Restoration

2.3.2 The Master Contractor shall describe the capacity of its network to support "Priority 1" traffic (i.e. critical applications).

2.3.3 The Master Contractor shall provide a map detailing its network coverage both in the State and in the United States, including a declaration of what constitutes coverage.

- If applicable, multiple maps describing various service offerings and coverage maps may be provided (e.g. 1X, EVDO, 3G, and 4G).

2.3.4 For Wireless Access DS and Last Mile DS, delivery of the UNI shall be available as an Ethernet handoff at both ends.

2.3.5 The Master Contractor shall adhere to the following UNI specifications:

2.3.5.1 UNI shall support speeds of minimum 10 Mbps and up to maximum speed of current ratified Ethernet Standard (IEEE 802.3); if the Ethernet standard is revised the speeds should be updated accordingly.

2.3.5.2 For Copper UNIs, auto-negotiation shall be supported for both speed and duplex.

2.3.5.3 For Fiber Optic UNIs of speeds greater than or equal to 1Gbps, auto-negotiation shall be supported.

2.3.5.4 All links shall be full duplex end to end.

2.3.5.5 The Master Contractor shall support physical UNI interface types for ratified IEEE 802.3 Standards Specifications.

- Each PORFP will specify the desired interface.
- Orders may require copper or fiber based service delivery at the discretion of DoIT and as specified in the PORFP.

2.3.5.6 Service speed shall not dictate UNI Speed or handoff.

2.3.5.7 All UNIs shall support termination of multiple concurrent services.

2.3.6 For solutions where contention for bandwidth is possible:

2.3.6.1 Quality of Service – The provider shall not rewrite customer markings (802.1p/CoS/EXP/DSCP).

2.3.6.2 The provider shall support QoS through either DSCP or 802.1p bit marking.

2.3.6.3 Traffic classification and marking will be performed by networkMaryland™ equipment on each end of the service.

- The carrier shall support a minimum of 3 queues for traffic for any contention based service delivery network:
- Voice/NC
  - Expedited forwarding
- Video/Interactive Applications
  - Assured Forwarding
  - Two drop profiles
- Bulk Data
  - Best Effort
  - Two drop profiles

2.3.6.4 The “exceed action” for non-conforming data shall be to service after all other conforming data.

## **2.4 FUNCTIONAL AREA I - WIDE BAND DDS REQUIREMENTS**

The State is seeking Wide Band services to provide data transport to the State in formats including but not limited to: DS-1, DS-3, OC-3, and OC-12. These services do not require Ethernet Delivery to the State.

- 2.4.1 Master Contractors submitting a proposal for Wide Band DDS shall include all services and all data transmission rates offered throughout the State of Maryland, in current service areas outside the State (see Attachment 15), and maximum pricing for all service areas.
- 2.4.2 Services provided in response to a PO by DoIT shall include the necessary interfaces to existing circuits in the State’s embedded base unless otherwise specified in the PORFP.

- 2.4.3 For circuit installation and maintenance, the selected PO Contractor shall coordinate with the LEC, OCC or IXC, if needed, to provide local access to the desired locations for all services.
- 2.4.4 The Master Contractor shall notify the State's Network Operations Center within 15 minutes of a service outage that impacts one or more circuits/services.
- 2.4.5 Upon request, the Master Contractor shall provide performance statistics and perform testing, monitoring and reporting on:
- Number of EVC/VLAN IDs defined per access line/port
  - CIR configured per EVC/VLAN ID
  - Port Speed
  - EVC/VLAN ID Peak Utilization
  - EVC/VLAN ID average busy hour utilization
  - EVC/VLAN ID average busy day utilization
  - Port peak utilization
  - Port average busy hour utilization
  - Port average busy day utilization
  - End-to-End traffic patterns per UNI including:
    - Total packets (ingress and egress)
    - Total discarded packets per hours
    - Excess burst packets per hour (ingress and egress)
    - Port status
    - EVC/VLAN ID assignment tables
- 2.4.6 All wide band DDS shall utilize the North American Standard for the appropriate wide band DDS service.
- 2.4.6.1 Minimum specifications for these services shall include, but not be limited to, a bit error rate (BER) performance equal to or better than  $1 \times 10^{-6}$  over any twenty-four (24) hour period.
- 2.4.6.2 Circuit availability shall equal or exceed 99.7% monthly.
- 2.4.7 The DS-1, DS-3, OC-3, OC-12 clock source shall be equivalent to a stratum three clock, compatible with the DDS offering of any other facility provider.
- 2.4.8 Central Office based DS3/DS1 multiplexing within all LATAs in Maryland shall meet the following specifications:
- Multiplexing provides the capability of converting capacity or bandwidth from a higher level to a lower level or a lower (DS1) level to a higher level (DS3).
  - DS3/DS1 multiplexing is an arrangement which converts a DS3 channel to twenty-eight DS1 channels utilizing time division multiplexing.

- A typical arrangement will consist of a lower capacity or bite rate (DS1) at an end user location and a higher capacity termination (DS3) at a State of Maryland hub.

## **2.5 FUNCTIONAL AREA II - WIRELESS ACCESS DATA SERVICE REQUIREMENTS**

The State is seeking Wireless Data service to diversify options for Last Mile Connectivity, as well as to provide wireless access to State data devices such that they can remain "on network" for the State.

- 2.5.1 The Master Contractor shall provide a solution that supports multiple APNs that can be multiplexed over a common UNI connection.
- 2.5.1.1 The Master Contractor shall provide details as to how additional APNs are provisioned.
- 2.5.1.2 The Master Contractor shall provide details as to how subscribers are provisioned to APNs.
- 2.5.1.3 The Master Contractor shall describe the process that DoIT could use to add end devices to the APN solution.
- 2.5.1.4 The Master Contractor shall provide details for separation of provisioning capabilities between the UNI and the APN.
- 2.5.2 The Master Contractor shall provide a connection to the physical network that provides redundant handoffs at diverse locations.
- UNI speeds of up to maximum speed of current ratified Ethernet Standard (IEEE 802.3)
- 2.5.3 APN Services shall be logically separated at the handoff to networkMaryland™ in one of the following ways:
- A discrete VLAN per APN
  - An Inter-provider VPN where networkMaryland™ will provide the VRF Target for each APN
  - Any other method which provides logical separation of services (IPSEC tunnels are a less desirable method of integration between APN and customer network and shall only be provided when no other alternatives exist)
- 2.5.4 The Master Contractor shall describe the methods available for dynamic routing between the State network and the cellular APN to achieve redundancy, including whether this can be adjusted on a per APN basis.
- The State prefers APN-A over UNI-A and APN-B over UNI-B.
- 2.5.5 The Master Contractor shall provide the following details regarding IP Addressing:

- What IP addressing is used inside of the APN?
- Details regarding how DHCP Relay or internal DHCP is configured
- Does the solution permit IP overlap between discrete APNs?

2.5.6 The Master Contractor shall describe options available for authentication of end users.

2.5.7 The Master Contractor shall describe whether the services offered provide Internet, Private transport, or a combination of both, and the manner in which this is achieved.

2.5.8 The Master Contractor shall describe the implementation of Quality of Service across the Master Contractor's networks.

2.5.9 The Master Contractor shall describe the capacity and manner its network supports prioritizing data as follows:

- Both internal to an APN as well as between an APN user and general public cellular customer
- Is there preferred or reserved capacity on the "system" to ensure surges in public demand do not affect APN resources?

2.5.10 Wireless Interface – The Master Contractor shall provide details as to the method of accessing the APN:

- Wireless hot spots
- USB Modems
- Devices on which a SIM is inserted into the device:
  - For SIM based devices, describe the cost associated with SIM acquisition.
  - On devices which are SIM based, are voice services available?
- Is there a requirement for devices to be purchased by the provider or can "approved" devices bought on the open market be used?

2.5.11 The Master Contractor shall indicate the Maximum IP MTU that is supported for transmission across the IP infrastructure (cellular device to APN termination UNI).

## **2.6 FUNCTIONAL AREA III - LAST MILE ACCESS DATA SERVICE REQUIREMENTS FOR ETHERNET DELIVERY**

The State is seeking Last Mile Access service to provide the State with access to local carriers that can provide an Ethernet delivery to the subscribers. This includes, but is not limited to, DSL, Fiber Optic Services, and DOCSIS. This may also include IP Services such as MPLS.

2.6.1 The Master Contractor shall adhere to the following Ethernet service specifications:

2.6.1.1 Ethernet Frame Size - The service shall support the delivery of CPE imposed Ethernet frames greater than or equal to 1642 Bytes. For the purposes of this document, the definition of an Ethernet frame includes the following:

- Preamble - 8 Bytes

- DA (Destination Address) – 6 Bytes
- SA (Source Address) – 6 Bytes
- 3x802.1q Tags – 12 Bytes
- EtherType – 2 Bytes
- Payload – 1604 Bytes – 1522+24+58 =1604
- CRC/FCS (Cyclical Redundancy Check) – 4 Bytes
- Support for an MTU of 2000 Bytes (or preferably larger)

2.6.1.2 The service shall be Ethertype agnostic, forwarding any frames with an Ethertype not otherwise indicated in the MEF specification if a MEF based service is offered.

2.6.1.3 Trouble/Service verification – The service shall support MEF based OAM:

- Shall support subscriber Maintenance Domain (MD) continuity check
- Shall support OAM/CFM at MD level 4 or lower (less)
- Shall support Y.1731 OAM to measure Latency/Jitter
- Provider is required to monitor its NID for 802.3AH Dying Gasp or equivalent

2.6.1.4 If the service does not support MEF based OAM, the service shall not interfere with the transmission of MEF OAM PDUs.

2.6.1.5 Bandwidth increment policy – Resolution of service speeds

- Service shall support in-service upgrade of service speeds when UNI speed does not change.
- Resolution of service speed shall be in increment no smaller than 20% of the UNI speed greater than the service speed. This means that the service should be orderable at a minimum resolution of 2, 4, 6, 8, 10, 20, 40, 60, 80, 100, 200, 400, 600, 800, 1000, 2000, 4000, 6000, 80000, and 10000Mbps. More fine resolution of orderable speeds is acceptable.

## **2.7 FUNCTIONAL AREA IV – COMMODITY INTERNET SERVICE DELIVERY**

The State is seeking commodity Internet Service Providers (ISP) that can deliver broadband Internet Service access across the State. This includes, but is not limited to:

- 1) Digital Subscriber Line (DSL)
- 2) Fiber Optic Services (such as Carrier Ethernet, xPON)
- 3) Wireless (licensed/non-licensed, cellular)
- 4) Data Over Cable (DOCSIS) based broadband access services.

The Master Contractor's Internet services shall adhere to the following service specifications:

2.7.1 Physical handoff of service to CPE (Customer Premise Equipment) – 802.3u 100BaseTX, 802.3ab 1000BaseT.

- a. Fiber variants may provide additional value but copper delivery is a required standard.
- b. Master Contractors must provide and maintain all required equipment up to and including the device that terminates the Ethernet physical UNI delivery.
- c. Points of demarcation shall be extended by the Master Contractor to within 25ft (as measured linearly along the same elevation) of the designated service delivery point requested by the State.
- d. Physical UNI speed shall be consistent with subscribed bandwidth profile.

#### 2.7.2 CPE IPv4 Specifications

- a. Shall support DHCP based IP allocation to the CPE device.
- b. Shall have the ability to provide a static IP address allocation.
- c. Shall have the ability to provide multiple IP addresses for CPE use.
- d. Assigned CPE device IP shall be publicly routable and not behind a carrier grade NAT infrastructure.
- e. NAT may be acceptable if the transport requirements are still met (see Section ## below).

#### 2.7.3 IPv4 Transport Specifications

- a. The transport service shall provide full access (unrestricted) to the Internet in terms of supported protocols and port numbers. If restrictions are applied to the service, the Master Contractor shall disclose the governing policies clearly indicating what protocols and ports are blocked. Security functions such as CPE source address validation are acceptable and expected by the State.
- b. At a minimum the service shall support transport for IPv4 protocol 50, 51 as well as UDP port 500 to support IPSEC based services. Master Contractors shall indicate that these protocols/services are transported without restriction in terms of policing or any other modification outside of the other general supported transport services provided by the solution.
- c. Service Level Agreements (SLA) requirements must include:
  - i. Last mile delay and packet loss acceptance tolerance as measured between the CPE and defined logical next hop routing device (Provider)
  - ii. Packet loss and delay between CPE and provider peering devices to external autonomous systems (provider backbone)
  - iii. Packet loss and delay tolerances for peering connections from provider network to upstream autonomous systems
  - iv. Service uptime SLA
  - v. SLA for service calls as well as what costs may be incurred by the customer associated with outage/performance degradation reported.

#### 2.7.4 Provider Peering Services

The State operates its own Internal ISP network service under AS27026. Currently this network has established direct mutual peering services at Equinix in Virginia as well as

Tierpoint in Baltimore. As indicated above the primary use of the commodity ISP services will be to provide backhaul services for state employees to their home networks running on the states infrastructure. Direct mutual peering service between the State and potential last mile broadband service providers would be mutually beneficial.

## **2.8 PORFP PROCEDURES**

### **2.8.1 PORFP Issuance Process**

- 2.8.1.1 DoIT will release a PORFP to all Master Contractors authorized to provide the services requested in the relevant LATA and functional area.
- 2.8.1.2 The Master Contractors shall respond to the PORFP with a proposal including a price quote as defined in the PORFP for the requested services within the time specified within the PORFP (Section 2.8.3).
- 2.8.1.3 The response shall confirm the elements in the PORFP and additionally quote prices for installation and the recurring monthly fee plus the mileage used for the quote and the date the Master Contractor shall install the requested service.
- 2.8.1.4 In responding to a PORFP, the amounts stated in the Volume II – Financial Proposal submitted by the Master Contractor are the maximum prices that the State will pay.
- 2.8.1.5 DoIT will determine the most advantageous proposal and notify the Awardee to proceed.
- 2.8.1.6 Upon a decision to proceed with the order, DoIT will begin the ordering process by submitting a requisition to the Contract Manager for the purchase of the services.

### **2.8.2 PORFP Content**

As an example, each PORFP may contain the following information:

- (a) Agency receiving services;
- (b) Description of required services: type of DS service, circuit originating and terminating addresses, originating and terminating NNXs, and the date service is required;
- (c) Invoicing instructions;
- (d) Required date for submission of proposal;
- (e) Installation requirements, if applicable;
- (f) Type of PORFP
- (g) Performance period;
- (h) Security requirements, if applicable;
- (i) Conflict of Interest Affidavit.

### **2.8.3 PORFP Proposal Submission Requirements**

Upon receipt of a PORFP, each Master Contractor shall, no later than the PORFP due date and time, either prepare and submit a detailed proposal, or provide a PORFP Feedback Form explaining why it does not intend to submit a Proposal. As an example, the Proposal may provide the following:

- (a) Explanation of how the Master Contractor intends to meet the requirements of the PORFP;
- (b) On-Net List of building locations and services provided to those locations;
- (c) Description of the proposed service;
- (d) Installation services provided and schedule, if applicable;
- (e) Subcontractors, if any, including required letters of authorization;
- (f) Proposed prices.

#### 2.8.4 Procedure for Awarding a PORFP

Evaluation criteria for award will be established at the PORFP level. The PO will be awarded to the Master Contractor whose proposal is determined to be the most advantageous to the State, considering price and the evaluation factors set forth in the PORFP. The State POC will initiate and deliver a PO to the selected Master Contractor.

## 2.9 SERVICE ORDER FULFILLMENT

- 2.9.1 The Master Contractor shall furnish services required in accordance with this RFP, individual PORFPs and the resulting contract(s).
- 2.9.2 All contracted services shall be provided as needed by the State and for the duration determined by the State.
- 2.9.3 Any service not designated on the Price Proposal Form shall not be provided without a modification to the Contract. See also Section 2.10 Procedure for Adding a Service Offering.
- 2.9.4 Within 15 calendar days after contract award, the Master Contractor shall identify any business office from which installation, billing and maintenance will be performed for each service offered in its proposal in a list to the Master Contract Manager. Updates to the business office list shall be submitted as needed within 20 days of a change to keep it current.
- 2.9.5 The Master Contractor shall receive purchase orders (POs) after notification of PORFP award.
- 2.9.6 Master Contractors shall only process purchase orders demonstrating DoIT approval and which fall under the scope of this Master Contract. DoIT approval is determined by the Master Contractor verifying a PO has been issued with the following information visible on the PO:
  - PO number
  - Contract number, and

- Electronic signature of the Contract Manager.
- 2.9.7 By 5:00 P.M. no later than ten (10) calendar days after the receipt of a PO the Master Contractor shall respond by e-mail with installation/termination due dates, locations, service types, circuit IDs, associated UNIs, and Agency account number for the requested services.
- 2.9.8 The Master Contractor shall complete installation/termination by the due date stated in the Master Contractor's e-mail.
- 2.9.9 Should the Master Contractor not provide the services within the due date stated in the PO, the State reserves the right to cancel the PO without further obligation or procure like services through alternative methods or invoke the liquidated damages provision of the contract.
- 2.9.10 The Master Contractor's installation due date stated shall take under consideration that access to some government facilities may be limited to normal State of Maryland Business Hours.
- 2.9.11 Each selected Master Contractor shall use Secure Socket Layer (SSL) to create a password-protected database of circuit service records for billing purposes.
- 2.9.12 The circuit service records database shall be accessible via the Internet within thirty (30) calendar days of PORFP award.
- 2.9.13 The database shall permit up to fifty (50) simultaneous DoIT-designated users to search and perform sorts by any field and be in a format acceptable to the State.
- 2.9.14 No record in the circuit service records database shall be deleted before three (3) **years after final payment by the State under Master Contract or any applicable** statutory limitations.
- 2.9.15 An electronic file record in an electronic format acceptable to the State shall be provided to the State upon request of the Contract Manager.
- 2.9.16 Failure to maintain the circuit service records database shall be grounds for non-payment of invoices.
- 2.9.17 The fields in the circuit service records database shall be columns and the column headings and types of data to be entered are as follows:
- Agency receiving service
  - Service Type: (e.g. Cable, DSL, Ethernet)
  - Circuit ID: (e.g. 38ASST123456CM)
  - Bandwidth: (e.g. DS-3)
  - Committed Information Rate: (e.g. 768, 10MBP/S, etc.)
  - Circuit Location A: (Number, Street, City State, Zip, Room)

- Circuit Location Z: (Number, Street, City State, Zip, Room)
- Destination Circuit ID (e.g. 38ASST987654CM)
- Service Due Date: (e.g. 08/28/03)
- Termination Date (the date the State selects for termination of service): (e.g. 05/01/02)
- Actual Install Date: (e.g. 08/26/03)
- Service Install Price: (e.g. \$459.34)
- Monthly Charges: (e.g. \$300.00)
- Purchase Order Number: (e.g. 050P380141)
- Billing/Account Number: (e.g. 000060939093 02Y)

2.9.18 The circuit service records database shall be able to provide an alphabetical “by-Agency” listing.

2.9.19 The circuit service records database shall be updated no later than the end of the next business day following a service addition/deletion/change. Initial data shall be available and correct following the transition activity described in 2.13.

2.9.20 Service Order Submission - the Master Contractor shall have a submission procedure consisting of at least one email address to place a service order, cancel a service order, and request service order status.

2.9.20.1 Every email address provided shall be dedicated to State of Maryland accounts, and shall only be answered by departments that service State of Maryland accounts.

2.9.20.2 The procedure shall provide for web-enabled capability to place a service order, cancel a service order, and request service order status.

2.9.20.3 A service order number shall be provided at the time of service request.

2.9.21 Service Order Tracking - the Master Contractor shall provide a web-enabled service order tracking system with the capability to obtain service order status.

2.9.21.1 The tracking system shall provide a detailed record of changes identifying:

- date the order is scheduled to be completed
- steps of the order that have been completed
- date each step was completed
- Master Contractor employee that completed each step
- date the order was completed

2.9.21.2 The original requestor shall be provided email status updates and an emailed order completion notification.

- 2.9.22 The State makes no commitment to guarantee a minimum amount or duration of the service nor does it accept any termination liability.
- 2.9.23 To terminate circuit services, DoIT will submit a requisition to include the circuit ID. The Contract Manager will then create and fax a PO to the Master Contractor which shall constitute the circuit termination order.
- 2.9.24 The Master Contractor shall not charge a fee for service termination and will cease charging the associated monthly fee for the termination month on a pro-rata basis no later than five (5) calendar days after notification to terminate a circuit or service.

## **2.10 PROCEDURE FOR ADDING A SERVICE OFFERING, TAX OR SURCHARGE**

- 2.10.1 Should new service offerings become available during the life of the Master Contract for an already-approved Functional Area and LATA, the Master Contractor may propose new service offerings.
- 2.10.2 New service offerings throughout the life of this Master Contract can be effected only by contract modification approved by DoIT.
- 2.10.3 A contract modification shall be required prior to the Master Contractor billing new surcharges that are instituted beyond Master Contractor control.

## **2.11 GENERAL OPERATIONS AND MAINTENANCE REQUIREMENTS**

- 2.11.1 The Master Contractor(s) shall provide network availability, maintenance (equipment and personnel) and management on a 24 X 7 X 365 basis.
- 2.11.2 During State of Maryland Business Hours, staff and equipment shall accommodate installations and/or maintenance at up to ten (10) sites simultaneously.
- 2.11.3 During non-business hours, the Master Contractor shall have sufficient qualified staff to meet circuit outage, provisioning, troubleshooting, and maintenance requirements.
- 2.11.4 The Master Contractor shall be responsible for maintaining, on an ongoing basis, all necessary traffic and routing information to keep its monthly end-to-end network availability at a 99.7% uptime for each installed circuit.
- 2.11.5 The Master Contractor providing services for Functional Area II (Wireless) shall provide a monthly report that lists all inactive devices (devices not attached to the network for a minimum of 30 consecutive days).
- The report shall be delivered in .csv format .
  - The report shall contain the following information:

- Agency Name
- Device or Circuit ID
- Last known Date of Activity

2.11.6 DoIT will make the decision of whether an inactive device will be permanently deactivated.

2.11.7 The Master Contractor shall schedule on-site work through State designated site contacts.

2.11.8 The Master Contractor's work shall be executed in such a manner that it does not disrupt day-to-day functions of the agency or cause any unauthorized disruptions to existing data telecommunications services.

2.11.9 The Master Contractor shall notify the Contract Manager fifteen (15) calendar days in advance by email of any planned service outages that may affect the State's services provided by the Master Contractor. This notice shall include at a minimum:

- reasons for the planned service outages;
- scope of the planned services outages; and
- expected duration of the planned service outage.

2.11.10 The Master Contractor shall make available to the Contract Manager, any and all logs, records, maintenance reports, and other similar documentation which the Contract Manager requests in order to investigate/validate outages.

2.11.11 The requested information shall be submitted to the Contract Manager by the end of the next business day following the request.

2.11.12 The Master Contractor shall utilize a structured, formalized system for network problem determination, notification, and resolution.

2.11.13 Within fifteen (15) calendar days after award, the Master Contractor shall provide documentation relating to the Master Contractor's Standard Operating Procedures for network monitoring and management to the Contract Manager.

2.11.14 The Master Contractor shall provide a procedure to perform an audit of services that appear on an invoice.

2.11.15 When requested, this audit of services:

- shall be performed at no additional charge;
- shall be completed within 30 days of request; and
- shall indicate any services billed on the invoice that have not been used within the last 90 days.

2.11.16 The Master Contractor shall be responsible for any and all installation coordination necessary to provide facilities premise to premise.

2.11.17 At all times, the Master Contractor shall retain responsibility that includes any subcontracted service where applicable, including but not limited to local loops.

## **2.12 SERVICE CENTER AND TROUBLE REPORTING**

2.12.1 The Master Contractor shall have service centers with remote maintenance capability, 24 hour staffing, and security. The State reserves the right to inspect any proposed Master Contractor's Service Centers prior to award.

2.12.2 The Master Contractor shall provide 24 X 7 X 365 service center support via a toll free telephone number for the purposes of obtaining technical support, troubleshooting, problem isolation, problem determination and resolution of problems.

2.12.3 The Master Contractor shall provide service telephone numbers to the State that are answered by departments servicing State of Maryland accounts.

2.12.4 At least one telephone number shall be provided to allow the State to cancel a service order and request service order status.

2.12.5 The Master Contractor shall provide dedicated Service Managers once a PORFP has been awarded (2.17.3).

2.12.6 The Master Contractor shall provide a documented procedure for standard trouble reporting and escalation of all trouble tickets to the Service Manager.

2.12.7 The trouble reporting procedures shall include:

- description of the process and information needed to complete a trouble ticket
- repair telephone number(s), web addresses, and/or email accounts to be used for each type of service
- procedures for how to escalate an outage for an immediate response (i.e., emergency call)

2.12.8 The Master Contractor shall detail the specific testing procedures and test equipment used when a trouble report has been received.

2.12.9 The trouble reporting procedures shall be made available online to designated DoIT personnel.

2.12.10A detailed record of changes shall be provided for each trouble ticket starting from the original trouble ticket request to final resolution.

- 2.12.11 Designated DoIT personnel shall be notified of updates to trouble reporting and trouble ticket escalation procedures.
- 2.12.12 The original requestor shall be provided email status updates and an emailed resolution notification.
- 2.12.13 The Master Contractor procedures shall keep the original ticket open until the State validates that the issue has been resolved.
- 2.12.14 The Master Contractor shall provide password protected problem-reporting systems accessible via the Internet that authorized State personnel may access via Secure Socket Layer (SSL) to open trouble tickets 24 X 7 X 365 and use that system to track the ticket status and escalations.
- 2.12.15 The system shall be in a format acceptable to the State and contain the following information:
- Contact Name
  - Ticket Number
  - Circuit ID
  - Location
  - Date Opened
  - Time Opened
  - Date Closed
  - Time Closed
  - Duration
  - Trouble Type
  - Trouble Summary
- 2.12.16 A service restoration period shall be based on:
- “start time” defined as when designated DoIT personnel inform a Master Contractor of service non-availability and a trouble ticket is opened, and
  - “end time” defined as when the trouble ticket is closed with the designated DoIT personnel at the time of service restoration.
- 2.12.17 The service restoration performance requirement applies to all services.
- 2.12.18 If requested, a two (2) hour on-site maintenance and repair service shall be provided in cases where remote support cannot solve the problem.
- 2.12.19 The Master Contractor shall, at minimum, provide a four (4) hour service restoration for outages during State of Maryland Business Hours.
- 2.12.20 The Master Contractor shall provide service restoration within twelve (12) hours or by 12:00 P.M., the next business day, whichever is sooner for outages occurring before or after State of Maryland Business Hours.

- 2.12.21 If a problem cannot be resolved within the first hour of the technician arriving on-site, an hourly status report shall be given to the designated DoIT personnel by telephone.
- 2.12.22 If an outage cannot be resolved within two (2) hours, the Master Contractor shall escalate the problem and notify the designated DoIT personnel via e-mail as to the expected time for service restoration.
- 2.12.23 If an outage cannot be resolved within eight (8) hours, the Master Contractor shall provide a senior management representative to address the problem and if requested by the State, meet with representatives from the State at a date, time and location of the State's choosing to provide an explanation of the problem and an estimated time for service restoration.
- 2.12.24 Any outage caused by State/Agency CPE or software shall be exempt from the service restoration performance requirement.
- 2.12.25 The Master Contractor, when notifying the designated DoIT personnel that it is State equipment that is associated with a service outage, shall provide evidence that the loss of service is related to State owned equipment.
- 2.12.26 Liquidated Damages will apply for failure on the part of a Master Contractor to meet these service restoration requirements (See Section 2.23).
- 2.12.27 The Master Contractor shall have a written procedure for reporting problems or suspected problems for the installed services and submit those procedures to the Contract Manager within fifteen (15) days after contract award for review and approval.
- 2.12.28 The Master Contractor shall submit written procedure updates to the Contract Manager for review and approval when procedures change.
- 2.12.29 The Master Contractor shall provide to the Contract Manager, within seven (7) days of Contract Award, a timetable for escalation of problems with names and phone numbers to expedite restoration of installed services and shall provide updates to the Contract Manager as changes occur.
- 2.12.30 The Master Contractor shall be responsible for the coordination of all repair activities with other service providers such as the LEC, OCC and IXC, State agencies and other Contractors.

## **2.13 INSURANCE**

- 2.13.1 The Master Contractor shall maintain property and casualty insurance with minimum limits sufficient to cover losses resulting from or arising out of Master Contractor action or inaction in the performance of the Contract by the Master Contractor, its agents, servants, employees or subcontractors.

- 2.13.2 The Master Contractor shall maintain a policy of general liability insurance that is of the proper type and of sufficient limits that the State, its officials, employees, their agents, servants, guests and subcontractors are reasonably covered in the event of injury or death.
- 2.13.3 The Master Contractor shall require that any subcontractors that are utilized to fulfill the obligations of the Contract obtain and maintain similar levels of insurance and shall provide the State with the same documentation as is required of the Master Contractor.
- 2.13.4 Worker's Compensation - The Master Contractor shall maintain such insurance as necessary and/or as required under Worker's Compensation Acts, U.S. Longshoremen's and Harbor Workers' Compensation Act, and the Federal Employers Liability Act.
- 2.13.5 General Liability - The Master Contractor shall purchase and maintain the following insurance protection for liability claims arising as a result of the Master Contractor's operations under this agreement:
- \$2,000,000 - General Aggregate Limit (other than products/completed operations)
  - \$2,000,000 - Products/completed operations aggregate limit
  - \$1,000,000 - Each Occurrence Limit
  - \$1,000,000 - Personal and Accidental Injury Limits
  - \$50,000 - Fire Damage Limit
  - \$5,000 - Medical Expense
- 2.13.6 The State shall be named as an Additional Insured on all General Liability policies (except Workman's Compensation) and Certificates of Insurance evidencing this coverage shall be provided prior to the commencement of any activities.
- 2.13.7 Such certificate(s) shall contain a thirty (30) day prior notice of cancellation.
- 2.13.8 Upon execution of a contract with the State, then current certificates of insurance will be provided to the State from time to time, as directed by the State.
- 2.13.9 Failure to maintain insurance coverage of the specified types and levels will be a breach of contract.
- 2.13.10 In the event the State receives a notice of cancellation, the Master Contractor shall provide the State with an alternate comparable insurance policy from another carrier at least thirty (30) days prior to the expiration of the insurance policy then in effect if the cancellation was due to the end of the policy term, and within thirty (30) days of notice of cancellation with coverage starting on or before the date of cancellation, if the cancellation was due to any other reason.

2.13.11 All insurance policies shall be with companies licensed to do business in Maryland.

## **2.14 TRANSITION-IN AND TRANSITION-OUT**

When a PORFP is issued and unless specified otherwise in the PORFP the following requirements apply:

- 2.14.1 The Master Contractor shall provide a project manager who shall create a transition-in and transition-out plan with schedules for each LATA.
- 2.14.2 The project manager shall be assigned to the project until the transition-in has been completed.
- 2.14.3 The transition-in shall take no longer than 90 days after notice to proceed (NTP).
- 2.14.4 The transition-in shall be complete when all items identified in Section 2.14.1 have been accepted by the Contract Manager as being successfully completed.
- 2.14.5 It is the Master Contractor's responsibility to ensure that at the end of the transition period, all accounts transitioned or active under the resulting Contract shall:
- 2.14.5.1 Have an account name in the format of MDATA XXX "Identifier" where:
- MDATA is the first word of the name
  - XXX is an agency acronym that is approved by the Contract Manager
  - The "Identifier" is defined by the DoIT, with a minimum of 25 characters
  - The acronym MDATA may only be used for the accounts under this resulting contract.
- 2.14.5.2 Display a corrected mailing address as submitted by the State,
- 2.14.5.3 Consolidate any accounts as requested by the State at no additional charge to the State,
- 2.14.5.4 Ensure that all web portal logins have the appropriate access permissions assigned to the web logins for all DoIT data telecommunications services personnel.
- 2.14.5.5 Ensure that all State accounts are included in the inventory report (See Section 2.19.4).
- 2.14.6 Each Master Contractor shall provide a project manager to support a smooth transition-out period at the end of the Contract. The services to be provided are:
- 2.14.7 Providing inventory reports on demand during the transition period (Section 2.19.4)

- 2.14.8 Attend transition meetings as requested and act as the Master Contractor's liaison to the transition project.
- 2.14.9 Prepare and submit to the Contract Manager a closeout report due on the last day of the contract which includes any open issues and recommended solutions as well as a final inventory of all existing circuit/services and a listing of all terminated circuits in the same electronic format as the circuit database specified in Section 2.9.9.
- 2.14.10 Cooperate with any successor to the contract with information and records a successor would require continuing the same or similar services.

## **2.15 SECURITY REQUIREMENTS**

- 2.15.1 The Master Contractor shall comply with and adhere to the Maryland State IT Security Policy and Standards. These policies may be revised from time to time and the Master Contractor shall comply with all such revisions. Updated and revised versions of the Maryland State IT Policy and Standards are available on-line at [www.DoIT.maryland.gov](http://www.DoIT.maryland.gov) - keyword: Security Policy.
- 2.15.2 Security of Master Contractor's Infrastructure
- 2.15.3 Master Contractor-owned Computer Equipment: The Master Contractor shall not connect any of its own equipment to an Agency's LAN/WAN without prior written approval by the State.
- 2.15.4 The Master Contractor shall complete any necessary paperwork for security access to sign on at the State's site if access is needed to the State's LAN/WAN, as directed and coordinated with the Contract Manager.
- 2.15.5 Physical Security for designated high security facilities
- 2.15.6 Designated high security facilities include the following locations, facilities, or sites:
- Statehouse, Senate, House of Delegates
  - Any State correctional facility
  - Any Maryland State Police (MSP) facility
- 2.15.7 Security Clearance:
- A) The Master Contractor shall obtain a Criminal Justice Information System (CJIS) State and Federal criminal background check, including fingerprinting, for each individual performing services under the Contract on a high security State facility premises. This check may be performed by a public or private entity. A CJIS Federal background check is necessary for each individual assigned to work on premises of a State high security facility and shall be completed within three (3) months of Contract award.

- B) The Master Contractor shall provide certification to the high-security facility's managing entity that the Master Contractor have completed the required CJIS criminal background checks and that the Master Contractor's employee assigned to this Contract has successfully passed this check (see Attachment 14). Each agency reserves the right to refuse any individual employee to work on premises of a high security facility, based upon certain specified criminal convictions, as specified by the agency.
- C) The Master Contractor shall annually renew the CJIS check for each individual assigned to work on premises of a State high security facility. The renewal shall be completed within one year from the date of the last issuance.
- D) The Master Contractor shall keep an up-to-date list of individuals with a completed CJIS background check that meet the requirements below. The Master Contractor shall make this list available to the high security facility's managing entity on request. The list shall include the employee name, date of background check and the general service area the employee covers (Excel format preferred). The Master Contractor will provide an updated copy of the list to the Contract Manager:
- (a) Every contract anniversary date,
  - (b) When an employee is added or removed from the list,
  - (c) On demand.
- E) The CJIS criminal record check of each individual who will work on premises of a State high security facility shall be reviewed by the Master Contractor for convictions of any of the following crimes described in the Annotated Code of Maryland, Criminal Law Article:
- (a) §§ 6-101 through 6-104, 6-201 through 6-205, 6-409 (various crimes against property);
  - (b) any crime within Title 7, Subtitle 1 (various crimes involving theft);
  - (c) §§ 7-301 through 7-303, 7-313 through 7-317 (various crimes involving telecommunications and electronics);
  - (d) §§ 8-201 through 8-302, 8-501 through 8-523 (various crimes involving fraud);
  - (e) §§ 9-101 through 9-417, 9-601 through 9-604, 9-701 through 9-706.1 (various crimes against public administration); or
  - (f) a crime of violence as defined in CL § 14-101(a).
- F) An individual who has been convicted of a felony or of a crime involving telecommunications and electronics from the above list of crimes shall not be permitted to work on premises of State high security facilities pursuant to this

Contract; an individual who has been convicted within the past five (5) years of a misdemeanor from the above list of crimes shall not be permitted to work on premises of State high security facilities.

- G) Each Agency may impose more restrictive conditions regarding the nature of prior criminal convictions that would result in a Master Contractor employee or subcontractor not being permitted to work on that Agency's premises. Upon receipt of an Agency's more restrictive conditions regarding criminal convictions, the Master Contractor shall provide an updated certification to that Agency regarding the personnel working at or assigned to that Agency's premises.

2.15.8 On-site Security requirement(s):

For all conditions noted below, the Master Contractor's personnel may be barred from entrance or leaving any site until such time that the State conditions and queries are satisfied.

2.15.9 Each person who is an employee or agent of a Master Contractor or subcontractor shall display his or her company ID badges at all times while on State premises. Upon request of State personnel, each such employee or agent shall provide photo identification for access to a site.

- A) Any person who is an employee or agent of a Master Contractor or subcontractor and who enters the premises of a facility under the jurisdiction of an Agency may be searched, fingerprinted (for the purpose of a criminal history background check), photographed and required to wear an identification card issued by the Agency.
- B) Each Agency may impose more restrictive conditions regarding the requirements for entering the premises of a high security facility. This may include surrendering a driver's license or other identification document at time of entry to the premises, to be retrieved upon departure from the premises.
- C) Further, each Master Contractor, employees and agents and Subcontractor employees and agents shall not violate Md. Code Ann., Criminal Law Art. Section 9-410 through 9-417 and such other security policies of the Agency that controls the facility to which access by the Master Contractor will be necessary. The failure of any of the Master Contractor's or Subcontractors employees or agents to comply with any provision of the Contract that results from award of this solicitation is sufficient grounds for the State to immediately terminate that Contract for default.
- D) Some State sites, especially those premises of the Department of Public Safety and Correctional Services, require each person entering the premises to document an inventory of tools, equipment and other materials brought on site, and to submit to a physical search of his or her person. Therefore, the Master Contractor's personnel shall always have available an inventory list of tools,

equipment and other materials being brought onto a site and be prepared to present the inventory list to the State staff or an officer upon arrival, as well as present the tools or equipment for inspection. Before leaving the site, the Master Contractor's personnel will again present the inventory list and the tools, equipment, or materials for inspection. Upon both entering the site and leaving the site, State staff or a correctional or police officer may search Master Contractor personnel.

- E) At all times at any facility, the Master Contractor's personnel shall ensure cooperation with State site requirements which include: being prepared to be escorted at all times, and providing information for badging and wearing the badge in a visual location at all times.

## **2.16 DISASTER RECOVERY**

- 2.16.1 The Master Contractor shall have a disaster recovery plan, subject to approval by the State, for restoring network outages.

## **2.17 STAFFING REQUIREMENTS**

- 2.17.1 The Master Contractor shall assign individual staff to perform the following functions. This staff is considered key personnel. Key personnel staffing shall be considered part of the Offeror's price for the services provided under this RFP.

- 2.17.2 Contract Administrator - Serves as the central point of contact on behalf of the Master Contractor. Responsibilities of this function include, but are not limited to:

- Acts as liaison between the Master Contractor staff and the State on all contract, service order and repair related matters
- Oversees orders received from the State ensuring that the requirements of the service order fulfillment process in Section 2.9 are met
- Has the authority to commit the Master Contractor staff and provide any necessary remediation plans
- Chairs the periodic service meetings between the Master Contractors and the State's Contract Manager if requested by the State

- 2.17.3 Transition Project Manager – shall be identified in the Master Contractor's response to a PORFP. Serves as the single point of contact for the transition-in process, answering questions and resolving issues during the transition period (See section 2.14). Responsibilities of this function include, but are not limited to:

- Ensures only valid accounts are assigned to the resulting Contract
- Creates procedures to transfer valid accounts to the resulting Contract
- Renames all new and transitioned accounts to follow the naming convention defined in Section 2.14.2.1

2.17.4 Billing Administrator – Serves as the single point of contact for all billing questions and issues. Responsibilities of this function include, but are not limited to:

- Promptly answers billing questions, researching and correcting billing issues and problems
- Ensures all valid accounts are associated with the Contract, and that all accounts associated with the Contract are valid State accounts,
- Maintains the naming convention for all State of Maryland accounts
- Provides knowledge and expertise regarding any billing question
- Provides circuit inventory report after transition period complete
- Provides capability to perform service audit (see section 2.10.8)

2.17.5 Service Manager – shall be identified in the Master Contractor’s response to a PORFP. Serves as the single point of contact and first point of escalation for the State during major, chronic and critical outages. Service Manager also serves as a technical resource to the State.

2.17.6 Availability of Key Personnel after PORFP Award

The Master Contractor shall ensure the identified key personnel will be available to perform Contract requirements 30 days from NTP for the PORFP. Key personnel shall be assigned to the State of Maryland as a dedicated resource.

2.17.7 Substitution of Key Personnel after PORFP Award

- A. The Master Contractor shall not substitute key personnel, other than by reason of transfers, promotions, an individual’s death, termination of employment, or for a sudden incapacitating illness that is projected to last more than five (5) days without prior written notice to the State.
- B. The Master Contractor shall replace key personnel within 15 business days of departure of the then current key personnel. If the then current key personnel are assigned different tasks within the Master Contractor company, the Master Contractor shall replace key personnel within 5 business days of departure.
- C. To replace any key personnel specified in the Contract, the Master Contractor shall submit resumes of the proposed substituted personnel, specifying the intended job function, to the Contract Manager.
- D. All proposed substitute personnel shall have qualifications equal or better than those of the replaced personnel, and shall be approved by the Contract Manager.
- E. The Contract Manager will arrange for the interview of the proposed substitution personnel. After interviewing, the Contract Manager will notify the Master Contractor in writing of the acceptance or denial of the proposed substitution.

2.17.8 Subcontractors

- A. The Master Contractor shall identify all subcontractors in its response to a PORFP and shall include a complete description of their role.
- B. The Master Contractor shall be responsible for all work performed by its subcontractor(s).
- C. The Master Contractor shall strive to maintain the subcontractors as originally proposed to the State.
- D. Any changes or additions by the Master Contractor of their subcontractors shall be pre-approved by the Contract Manager.

#### 2.17.9 Resolution of Performance Issues

- A. At any time during the purchase order period of performance, should the performance of a Master Contractor resource be unsatisfactory, the State will give written notice to the Master Contractor, describing problems and delineating remediation requirement(s).
- B. The Master Contractor shall respond with a written remediation plan within three business days and implement the plan immediately upon written acceptance by the Contract Manager.
- C. Should performance issues persist, the Contract Manager may give written notice or request the immediate removal of person(s) whose performance is at issue.

### 2.18 DOCUMENTATION

2.18.1 The Master Contractor shall provide documentation to State employees as needed and requested by the State for any web system that supports the State accounts.

2.18.2 The Master Contractor shall provide documentation in compliance with applicable laws and requirements for visual and non-visual access.

### 2.19 REPORTS AND MEETINGS

#### 2.19.1 Status/Service Meetings

The Master Contractor shall hold periodic meetings with the State as scheduled by the Contract Manager.

#### 2.19.2 Invoicing Reports

At a minimum of every month, the Master Contractor shall generate and provide to the Contract Manager a report that includes the following information for each active account invoiced under the resulting Contract:

- The account name (corresponding to naming convention in section 2.14.5.1)
- The account number
- The total quantity and cost for each service type

- The total installation cost per account

The report shall be available in Excel format (Excel 2007 or later). The Contract Manager shall be notified when a new invoicing report is available.

#### 2.19.3 Trouble Ticket Metrics

The Master Contractor shall make available a report on trouble ticket metrics that provides the following information:

- Number of tickets opened per period (e.g., month)
- Average time between problem reported and commencement of resolution actions
- Average Time between problem reported and service restoration
- Average time between escalation and commencement of resolution actions
- Average time between escalation and service restoration

#### 2.19.4 Inventory Reports

The Master Contractor shall provide inventory reports on demand that provide the following information:

- Circuit ID
- Installation date
- Acceptance date
- Termination date if applicable
- Monthly cost of circuit

#### 2.19.5 Additional Reports

The Master Contractor shall provide additional reports for managing State accounts as requested by the Contract Manager.

Additional reports shall be available via the web portal.

### 2.20 MBE PARTICIPATION REPORTS

No MBE Participation Reports are required for this RFP.

### 2.21 INVOICING

2.21.1 The Master Contractor shall submit invoicing procedure and samples with its proposal (See Section 3 Proposal Format and Submission Requirements).

2.21.2 Master Contractor invoices for services shall be submitted no later than fifteen (15) calendar days following the month the service was provided.

2.21.3 Minimum invoice content:

- Invoice Period
- Federal ID Number
- Master Contractor Contact Information
- Invoice number
- Amount due
- Adjustments
- Surcharges
- Description of Services
- Purchase Order Number or Blanket Purchase Order Number

2.21.4 The Master Contractor shall clearly label the LATA associated with each service billed on an invoice.

2.21.5 An invoice shall meet the account name labeling requirement stated in Section 2.14.5.1.

2.21.6 For discontinued services, the invoice shall meet requirements stated in Section 2.9.24.

2.21.7 If a billing error is identified that results in an increase to an invoice, the Master Contractor shall retroactively bill for the lesser of either the past due amount from the actual date the billing error started, or three (3) months of the discrepancy amount.

2.21.8 If a billing error is identified that results in a decrease to an invoice, the Master Contractor shall credit all overcharges from the original date the billing error was made until the error has been corrected.

2.21.9 If a billing error has been identified, the Master Contractor shall, at the Contract Manager's Request, check all State accounts from the resulting Contract, to ensure the billing error has not impacted multiple State accounts.

2.7.1.1 If the billing error does impact multiple accounts, each account shall have the appropriate credits/debits applied.

## **2.22 PRECEDENCE OF CONTRACT OVER TARIFF**

The Master Contractor agrees to make any necessary filings with the Federal Communications Commission and the State of Maryland Public Service Commission, as required by law, which shall incorporate the rate-affecting terms and conditions contained in the contract documents, and which shall provide that the filings shall be construed in a manner that is consistent with the terms and conditions of this Contract. In all cases, State terms and conditions set forth in this RFP and Attachment 2 (the Contract) take precedence over any tariff terms and conditions. Master Contractor agrees that all pricing is monthly pricing and there are to be no termination liability charges applied to this Contract.

## **2.23 LIQUIDATED DAMAGES**

2.23.1 Time is an essential element of the contract and accordingly, it is important that contract work be vigorously pursued until completion. It is also critical to the success of the State's

programs that the data communications network operates in an extremely reliable manner, with a minimum of 99.7% availability per circuit per month. Downtime on any part of the contracted service must be minimized by prompt response and corrective action within the timeframes described in Section 2.12.6. Moreover, a delay past the original installation timeframe for a new service must be minimized.

- 2.23.2 In the event action to restore service brings the monthly availability below the standard identified in Section 2.11.2, or installation of new service is delayed by the Master Contractor, the amount of damage which will be sustained from a delay will be the amount set forth in the paragraphs below, and the Master Contractor agrees that in the event of any such delay, the Master Contractor shall pay such amount as liquidated damages and not as a penalty. The State, at its option for amount due the State as liquidated damages, may deduct such from any money payable to the Master Contractor or may bill the Master Contractor as a separate item.
- 2.23.3 If the Master Contractor fails to restore a contracted service within the specified time frame, then the State may assess liquidated damages on the basis of \$50 per hour for the affected circuit per hour of delay past the standard up to a maximum of the monthly circuit fee. The applicable time performance standard and delay of work designation time ("start time" and "end time") shall be in accordance with Section 2.12.
- 2.23.4 If the Master Contractor fails to install a circuit within the times defined in Section 2.9, then the State may assess liquidated damages on the basis of 1/30<sup>th</sup> of the monthly circuit fee for each calendar day of delay up to a maximum of the monthly circuit fee.
- 2.23.5 The Master Contractor will not be assessed liquidated damages when the event is the result of a national emergency or natural disaster, fire or other acts of God, provided the Master Contractor notifies the State of such circumstances and the State determines the event was beyond the control and without fault or negligence of the Master Contractor. This compensation will be for delay related costs only. The Master Contractor will remain liable for other non-delay costs actually incurred by the State such as excess procurement costs in the event the contract is terminated for cause and must be re-competed by the State or awarded to another Master Contractor.
- 2.23.6 Liquidated Damages shall apply immediately upon award of a PORFP.

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### **3 PROPOSAL FORMAT AND SUBMISSION REQUIREMENTS**

#### **3.1 TWO PART SUBMISSION**

Offerors shall submit proposals in two (2) separate volumes:

- Volume I - TECHNICAL PROPOSAL, labeled "Volume I – Technical Proposal"
- Volume II - FINANCIAL PROPOSAL, labeled "Volume II – Financial Proposal"

Offerors will only be required to submit one proposal, even if proposing multiple Functional Areas. As described below, the Technical Proposal shall contain a section on Offeror general information and separate sections for each Functional Area proposed. Offerors must follow the instructions within this section.

#### **3.2 Proposal Packaging and Delivery**

3.2.1 Proposals delivered by facsimile shall not be considered.

3.2.2 Provide no pricing information in the Technical Proposal. Provide no pricing information on the media submitted in the Technical Proposal.

3.2.3 Offerors may submit Proposals by electronic means as described.

- A. Electronic means includes e-mail to the Procurement Officer address listed on the Key Information Summary Sheet.
- B. An Offeror wishing to deliver a hard copy (paper) Proposal shall contact the Procurement Officer for instructions.

3.2.4 E-mail Submissions

- A. All Proposal e-mails shall be sent with password protection.
- B. The Procurement Officer will not accept submissions after the date and exact time stated in the Key Information Summary Sheet. The date and time of submission is determined by the date and time of arrival in the Procurement Officer's e-mail box. Time stamps on outgoing email from Master Contractors shall not be accepted. Requests for extension of this date or time will not be granted. Except as provided in COMAR 21.05.03.02F, Proposals received by the Procurement Officer after the due date will not be considered.
- C. The State has established the following procedure to restrict access to Proposals received electronically: All Technical and Financial Proposals must be password protected, and the password for the TO Technical Proposal must be different from the password for the TO Financial Proposal. Offerors will provide these two passwords to DoIT upon request or their Proposal will be deemed not susceptible for award. Subsequent submissions of Proposal content will not be allowed.
- D. The TO Procurement Officer will only contact those Offerors with TO Proposals that are reasonably susceptible for award.

- E. Proposals submitted via e-mail must not exceed 25 MB. If a submission exceeds this size, split the submission into two or more parts and include the appropriate part number in the subject (e.g., part 1 of 2) after the subject line information below.
- F. The e-mail submission subject line shall state the RFP F50B4400028 – Expansion Window #1 and either “Technical” or “Financial.”
- G. Offerors shall include a section in the Technical Proposal providing general information about the Offeror. Offerors shall include a separate section for each Functional Area proposed describing what services of that Functional Area (as described in Section 2) the Offeror has the ability to provide and how the Offeror qualifies to perform those services.
- H. All pages of both proposal Volumes shall be consecutively numbered from beginning (Page 1) to end (Page “x”).

### **3.3 Volume I – Technical Proposal**

#### **3.3.1 Transmittal Letter**

A transmittal letter shall accompany the technical proposal. The purpose of this letter is to transmit the proposal and acknowledge the receipt of any addenda. The transmittal letter should be brief and signed by an individual who is authorized to commit the Offeror to the services and requirements as stated in this RFP. The transmittal letter shall list the official name and Federal Employer Identification Number of the entity submitting the proposal. It shall also include the name and contact information of a person authorized to make commitments on behalf of the entity. See Offeror’s responsibilities in Section 1.22.

#### **3.3.2 Format of the complete Technical Proposal**

Inside a sealed package described in Section 3.3, above, and separate from the Financial Proposal sealed envelope, one unbound original, so labeled, one copy and the electronic version shall be provided. The paragraphs in this RFP are numbered for ease of reference. In addition to the instructions below, the Offeror’s Technical Proposal shall be organized and numbered in the same order as this RFP. This proposal organization will allow State officials and the Evaluation Committee to “map” Offeror responses directly to RFP requirements by paragraph number.

The Technical Proposal shall include the following sections in this order:

##### **3.3.3.1 Title and Table of Contents**

The Technical Proposal shall begin with a title page bearing the name and address of the Offeror and the name and number of this RFP. A table of contents shall follow the title page for the Technical Proposal.

##### **3.3.2.1 Executive Summary**

The Offeror shall condense and highlight the contents of the Technical Proposal in a separate section titled “Executive Summary”. The Executive Summary shall provide a broad overview of the contents of the entire proposal. The Executive Summary shall also identify any exceptions the Offeror has taken to the

requirements of this RFP, the Contract (Attachment 2), or any other attachments. If there are no exceptions taken, the Offeror is to state that they have taken no exceptions to the requirements of this RFP, the Contract (Attachment 2), or any other attachments. Exceptions to terms and conditions may result in having the proposal deemed unacceptable or classified as not reasonably susceptible of being selected for award. In addition, the Offeror shall clearly identify each Functional Area for which they are proposing services.

### 3.3.2.2 Offeror General Information

A) This section shall include the following from the Offeror:

1. Corporation/organization size,
2. Experience,
3. Services provided,
4. Length of time the organization has been providing the services listed in the specific Functional Areas from Section 2,
5. Statement of fiscal integrity for the two most recent full fiscal years preceding the date of this RFP.

B) Documentation that addresses the Offeror's financial solvency may include, but is limited to, one, some or all of the following:

1. Current balance sheet,
2. Certified financial statement,
3. Dunn and Bradstreet rating,
4. Line of credit,
5. Successful financial track record, and
6. Evidence of adequate working capital.

3.3.2.3 Past Performance - Must be provided for each Functional Area proposed (one example may be used for multiple Functional Areas; however, you must clearly list the Functional Areas that apply to that example).

This section shall include the following:

- A) The Offeror shall provide evidence of its capabilities to provide the equipment and services outlined in Section 2 of this RFP for each Functional Area proposed.
- B) The Offeror shall provide an example of a successful engagement (on time, within budget, within scope) in each proposed Functional Area. The example(s) shall include the engagement name, the equipment and services provided, and the objectives satisfied.
- C) For each example engagement provided, the Offeror shall include a supporting reference with the following information:

1. Name of client organization
  2. Name, title, email, and telephone number of Point of Contact for client organization (Point of Contact must be accessible and knowledgeable about Offeror's performance for this customer)
  3. Value, type, and duration of contract(s) supporting client organization
  4. The services provided, scope of the Contract, objectives satisfied
- D) State of Maryland Experience: If applicable, the Offeror shall submit a list of all contracts it currently holds, or has held within the past five years, with any government entity of the State of Maryland. For each identified contract, the Offeror shall provide:
1. The State contracting entity;
  2. A brief description of the services/goods provided;
  3. The dollar value of the contract;
  4. The term of the contract;
  5. Whether the contract was terminated prior to the specified original contract termination date, and if yes, the reason(s) why;
  6. Whether any available renewal option was not exercised;
  7. The State employee contact person (name, title, telephone number and if possible e-mail address).

**Please Note: It is critical that the contact information provided for any reference is current and accurate. The reference must be knowledgeable of the project and the Offeror's performance and available to discuss the Offeror's performance.**

### 3.3.3 Offeror Technical Response to RFP Requirements

- A) The Offeror shall address the requirements in the Technical Proposal and describe how its proposed services meet the requirements as described in the RFP (Section 2). The response shall address each requirement in Section 2 of this RFP in order, and shall contain a cross reference to the RFP requirement.
- B) If the State is seeking Offeror agreement to a requirement, the Offeror shall state agreement or disagreement. Any paragraph that responds to a work requirement shall include an explanation of how the work will be performed.
- C) The Offeror shall provide its On-Net List of building locations and services provided to those locations by LATA.
- D) The technical response shall include a description of invoicing procedure and sample invoices in response to requirement 2.21.

- E) Offeror shall identify in its Technical Proposal all tariffs, taxes and surcharges from which its discounted rates are derived.
- F) If proposing to RFP 2.7 Functional Area IV – Commodity Internet Service Delivery, Offerors must provide the following information regarding their offering:
- 1) Indicate what, if any, additional available physical UNI support is available.
  - 2) Provide details on the expected DHCP lease time and how often it can be expected that the assigned address will be changed.
  - 3) Indicate if static IP address allocation is available for the proposed services.
  - 4) Indicate if multiple IP addresses for CPS use is available and what constraints are associated with this option.
  - 5) Indicate what if any features/services (PPPOE, 802.1x) must be supported by the CPE device to integrate with the proposed service.
  - 6) At a minimum the service must support transport for IPv4 protocol 50, 51 as well as UDP port 500 to support IPSEC based services. Indicate directly that these protocols/services are transported without restriction in terms of policing or any other modification outside of the other general supported transport services provided by the solution.
  - 7) Disclose any usage based service degradation policies that are present in your proposed service. For example, if service bandwidth is tiered based on usage caps please provide details on the cap model and expected customer facing behaviors.
  - 8) Provide SLA information for provided services for transport of IPv4 data.
  - 9) Indicate for each service offering if there are data maximums that apply to total bandwidth transported. If there are caps on transport list what they are and what happens in the event the maximums are exceeded. Also indicate if the data caps are considered only per delivery location or if there is an aggregate model available that encompasses several "member" location sites (such as shared data plans). If there are optional services with and without caps please provide details for each offering and associated rate structures.
  - 10) A direct mutual peering service between the State and potential last mile broadband service providers would be mutually beneficial. Please indicate:
    - a. Does your offer support direct mutual peering?
    - b. Does your offer support redundant peering services?
    - c. Does your company have a published direct peering policy, and if, so please provide it.

**Data Telecom Services Expansion Window**  
**Solicitation #: 060B8400065**

**RFP Document**

- d. What locations within the state or the above-mentioned datacenters would be potentially viable “meet-me” locations to facilitate such peering services

**3.3.4 Financial Capability and Statements**

The Offeror shall include Financial Statements. Provide copies of the last two (2) year-end financial statements (preferably independently audited).

**3.3.5 Insurance Submission**

3.3.5.1 Provide proof of insurance described in Section 2.13

3.3.5.2 A copy of the Offeror’s current certificate of insurance required by Section 2.13 (property, casualty and liability), which, at a minimum, shall contain the following:

- Carrier (name and address)
- Type of insurance
- Amount of coverage
- Period covered by insurance
- Exclusions

**3.3.6 Required Technical Proposal Submissions:**

- Attachment 3- Bid/Proposal Affidavit – Completed and Signed
- Attachment 6 – Conflict of Interest Affidavit and Disclosure – Signed
- Attachment 10 – Living Wage Affidavit of Agreement and Disclosure – Signed
- Insurance Certificate
- Financial Statements
- On-Net List(s) per LATA

**3.4 Volume II - Financial Proposal**

**3.4.1 Required Financial Proposal Attachments:**

The Financial Proposal shall contain all cost information in the format specified in Attachment 1 for Functional Areas 1 through 4 for each LATA proposed. Complete the price sheets only as provided in the Price Proposal Instructions.

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## **4 EVALUATION CRITERIA AND SELECTION PROCESS**

### **4.1 Evaluation Criteria**

Master Contracts will be awarded to all qualified Offerors in accordance with the Competitive Sealed Proposals procurement process under Code of Maryland Regulations 21.05.03.

### **4.2 Technical Criteria**

Once the requirements in Section 2 are satisfied, the following criteria will be applied to each Technical Proposal:

- Technical Response to Requirements (Ref. Section 3.3.3)
- Offeror Past Experience (Section 3.3.2.3)
- Offeror Overall Qualification (Section 3.3.2.3)

### **4.3 Financial Criteria**

Financial Proposals will be evaluated separately. Prices set by Master Contracts are the maximum prices the State will pay for any data telecommunications service.

### **4.4 Reciprocal Preference**

Although Maryland law does not authorize procuring agencies to favor resident Offerors in awarding procurement contracts, many other states do grant their resident businesses preferences over Maryland Master Contractors. Therefore, as described in COMAR 21.05.01.04, a resident business preference will be given if: a responsible Offeror whose headquarters, principal base of operations, or principal site that will primarily provide the services required under this RFP is in another state submits the most advantageous offer; the other state gives a preference to its residents through law, policy, or practice; and, the preference does not conflict with a Federal law or grant affecting the procurement Contract. The preference given shall be identical to the preference that the other state, through law, policy or practice gives to its residents.

### **4.5 Selection Procedures**

#### **4.5.1 General Selection Process**

Master Contracts will be awarded in accordance with the Competitive Sealed Proposals process under Code of Maryland Regulations 21.05.03. The Competitive Sealed Proposals method is based on discussions and potential revision of proposals based on such discussions.

Accordingly, the State may hold discussions with all Offerors judged reasonably susceptible of being selected for award, or potentially so. However, the State also reserves the right to make an award without holding discussions. In either case of holding discussions or not doing so, the State may determine an Offeror to be not responsible and/or an Offeror's proposal to be not reasonably susceptible of being selected for award, at any time after the initial closing date for receipt of proposals and the review of those proposals.

#### 4.5.2 Selection Process Sequence

- 4.5.2.1 The first step in the process will be an evaluation for technical merit to assure Offeror's full understanding of the State's requirements and the Offeror's ability to perform. During this review oral presentations and discussions may be held. The purpose of such discussions will be to assure a full understanding of the State's requirements and the Offeror's ability to perform, and to facilitate arrival at a Contract that will be most advantageous to the State. For scheduling purposes, Offerors should be prepared to make an oral presentation and participate in discussions within two weeks of the delivery of proposals to the State. The Procurement Officer will contact Offerors when the schedule is set by the State.
- 4.5.2.2 Offerors must confirm in writing any substantive oral clarification of, or change in, their proposals made in the course of discussions. Any such written clarification or change then becomes part of the Offeror's proposal.
- 4.5.2.3 The financial proposal of each qualified Offeror will be evaluated separately from the technical evaluation. After a review of the financial proposals of qualified Offerors, the Procurement Officer may again conduct discussions to further evaluate the Offeror's entire proposal.
- 4.5.2.4 When in the best interest of the State, the Procurement Officer may permit Offerors who have submitted acceptable proposals to revise their initial proposals and submit, in writing, best and final offers (BAFOs).

#### 4.5.3 Award Determination

Upon completion of all discussions, negotiations, and reference checks, the Procurement Officer will recommend award of a Master Contract to all technically qualified Offeror(s).

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**5 LIST OF ATTACHMENTS**

| <b>Attachment Label</b> | <b>Attachment Name</b>   | <b>Submit with Proposal?*</b><br>(Submit, Do Not Submit, Not Applicable to this RFP) |
|-------------------------|--|--|
| Attachment 1            | Price Proposal Instructions  | Do Not Submit (Submit Price Sheets with Financial Proposal)                          |
| Attachment 2            | Contract   | Do Not Submit with Proposal  |
| Attachment 3            | Bid Proposal Affidavit   | Submit with Technical Proposal   |
| Attachment 4            | Minority Business Enterprise Participation (Attachments D-1 – D-7) | <i>Not applicable to this RFP</i>  |
| Attachment 5            | Contract Affidavit   | Do Not Submit with Proposal  |
| Attachment 6            | Conflict of Interest Affidavit and Disclosure                      | Submit with Technical Proposal   |
| Attachment 7            | Pre-Proposal Response Form   | Do Not Submit with Proposal  |
| Attachment 8            | Pre-Proposal Conference Directions                                 | Do Not Submit with Proposal  |
| Attachment 9            | Living Wage Requirements   | Do Not Submit with Proposal  |
| Attachment 10           | Living Wage Affidavit of Agreement                                 | Submit with Technical Proposal   |
| Attachment 11           | Non-Disclosure Agreement (OFFEROR)                                 | <i>Not applicable to this RFP</i>  |
| Attachment 12           | Non-Disclosure Agreement (CONTRACTOR)                              | <i>Not applicable to this RFP</i>  |
| Attachment 13           | Mercury Affidavit  | Do Not Submit with Proposal  |
| Attachment 14           | Criminal Background Check Affidavit                                | Do Not Submit with Proposal  |
| Attachment 15           | List of Interstate Circuits  | Do Not Submit with Proposal  |

\*Unless specified otherwise in the RFP submission instructions, each submitted attachment shall be in PDF format, legibly signed by an individual authorized to bind the Offeror to the statements made in the attachment.

## ATTACHMENT 1 PRICE PROPOSAL FORM

### INSTRUCTIONS

In order to assist Offerors in the preparation of their price proposal and to comply with the requirements of this solicitation, Price Instructions have been prepared.

Offerors shall submit a price proposal in accordance with the instructions specified herein. Do not alter the price sheet for Functional Area 1 or the proposal may be rejected. All price sheets shall be signed and dated by an individual who is authorized to bind the Offeror to all the proposed prices. Any incorrect entries or inaccurate calculations by the Offeror will be treated as provided in COMAR 21.05.03.03E and 21.05.02.12.

The Offeror shall only bill the State for those services, taxes, tariffs, and other surcharges listed on the pricing sheets.

THE OFFEROR SHALL DETERMINE WHICH FUNCTIONAL AREA(S) TO PROPOSE.

IF PROPOSING TO FUNCTIONAL AREA I, THE OFFEROR SHALL SUBMIT THE APPROPRIATE PRICE SHEET AND IDENTIFY EACH LATA IT INTENDS TO PROPOSE.

IF PROPOSING TO FUNCTIONAL AREAS II, III AND IV, THE OFFEROR SHALL SUBMIT ITS OWN PRICE SHEET AND PROVIDE PRICING IN ITS OWN PRICING MODEL. FURTHER INSTRUCTIONS ARE LISTED BELOW.

#### I. FUNCTIONAL AREA I – Wide Band DDS

A. Complete the following 7 price sheets if proposing Functional Area 1 (FA-1):

1. LATA 236
2. LATA 238
3. LATA 240
4. LATA 242
5. InterState
6. FA 1 Optic Transport
7. FA-1 MUXing

B. Instructions for each of the 7 price sheets:

1. Column B (Unit Price) - the price for the item identified in column A. This column is to be used for price per unit charges. The price per unit shall be the monthly price unless otherwise specified.
2. Column C (Quantity) – these quantities are for PROPOSAL purposes. They do not represent the final quantities which may be procured by the State during the contract period.
3. Column D (Extended Price) – calculated. Column B x Column C
4. Column E – (NRC) (Non-recurring cost) - the one-time installation charge for the item identified in column A. Do not enter recurring charges in this column.

#### II. FUNCTIONAL AREA II – Wireless Access (1 price sheet)

A. Provide a price sheet if proposing Functional Area II:

1. FA II Wireless

**Data Telecom Services Expansion Window**  
**Solicitation #: 060B840065****RFP Document****B. Instructions for the FA II price sheet:**

1. All proposed prices shall be maximum, not-to-exceed rates that will cover every component needed to provide service to the State during the period of performance.
2. At a minimum, the pricing shall include:
  - a) The cost for the service to “hand-off” to the State’s network;
  - b) The cost for authentication;
  - c) The cost for connections (including redundant connections);
  - d) The cost for 3G/4G technology;
  - e) Recurring fees and surcharges associated with the cost of maintaining service and support; and
  - f) The one-time activation and deactivation charge for the item.

**III. FUNCTIONAL AREA III – Last Mile Access****A. Provide a price sheet if proposing Functional Area III****1. FA III Last Mile Access Data Services & IP Services****B. Instructions for the Functional Area III price sheet:**

1. All proposed prices shall be maximum, not-to-exceed rates that will cover every component needed to provide service to the State during the period of performance.
  - a) At a minimum, the pricing shall include the following for Last Mile:
    1. Type of service delivery (e.g. DOCSIS, FiOS, DSL);
    2. Base monthly charge for the unit, not including any other charges or fees;
    3. Recurring fees and surcharges associated with the cost of maintaining service and support;
    4. The one-time installation charge for the item;
    5. The one-time charge to extend the demarcation of the item (cost per foot);
    6. The cost for the service to “hand-off” to the State’s network; and
    7. The cost for aggregation.
  - b) At a minimum, the pricing shall include the following for IP Services:
    1. Base monthly charge for class of service;
    2. Base monthly charge for the unit, not including any other charges or fees;
    3. Recurring fees and surcharges associated with the cost of maintaining service and support;
    4. The one-time activation and deactivation charge for the item; and
    5. The cost for the service to “hand-off” to the State’s network.

IV. FUNCTIONAL AREA IV – Commodity Internet Service

- A. Provide a price sheet if proposing Functional Area IV
- B. Instructions for the FA IV price sheet:

Provide plans and pricing for:

- 1. Options in upload/download speeds
- 2. Monthly cost for each option
- 3. One-time costs
- 4. Installation costs
- 5. Equipment charges, non, one-time or monthly

In addition, please provide the following:

- 1. Pricing associated with leasing vs purchase of equipment.
- 2. Pricing structure associated with extended demarcation points within a facility.
- 3. Additional pricing for static IP address allocation.
- 4. Additional pricing for multiple IP addresses for CPE use.
- 5. If there are optional services with and without caps, provide rate structure.
- 6. Pricing, if any, that would be incurred by the State and what if any traffic use profiles may result in a lower cost mutual peering option.

**ATTACHMENT 2 CONTRACT**

**THIS CONTRACT (the "Contract")** is made this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ by and between CONTRACTOR and the customer **STATE OF MARYLAND**, acting through the **DEPARTMENT OF INFORMATION TECHNOLOGY** ("DoIT" or sometimes the "Agency").

**IN CONSIDERATION** of the premises and the covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows: the parties agree as follows:

**1. Definitions**

In this Contract, the following words have the meanings indicated:

1.1. "Master Contract" means this Contract for Data Telecommunications Services, RFP F50B4400028

1.2. "Master Contractor" means \_\_\_\_\_ whose principal business address is \_\_\_\_\_ and whose principal office in Maryland is \_\_\_\_\_.

1.3. "Contract Manager" means the DoIT representative and first point of contact for contract procedures and any discrepancies. The Agency may change the Contract Manager at any time by written notice.

1.4. "Department" means the Department of Information Technology (DoIT).

1.5. "Financial Proposal" means the Master Contractor's Financial Proposal (BAFO) dated \_\_\_\_\_.

1.6. "Notice to Proceed (NTP)" means a formal written notification from the Contract Manager that a specific Master Contractor selected to perform a PO should immediately, or as of a date contained in the notice, begin performance of the PO.

1.7. "Procurement Officer" means the person with the responsibilities and authorities of "procurement officer" under the Annotated Code of Maryland, and Title 21 of the Code of Maryland Regulations ("COMAR") or their designee. The Agency may change the Procurement Officer at any time by written notice.

1.8. "Purchase "Order (PO)" authorizes Master Contractor to proceed with delivery of products and/or any services requested by a Service Request.

1.9. "RFP" means the Request for Proposals for Data Telecommunications Services, Solicitation No. F50B4400028, dated \_\_\_\_\_, and any amendments thereto issued in writing by the State.

1.10. "State" means the State of Maryland.

1.11. "Agreement" means a signed contract between DoIT and the Master Contractor selected via a PORFP or to perform a service.

1.12. "Proposal" means the technical and financial response by a Master Contractor to a PORFP.

1.13. "Purchase Order Request for Proposals" (PORFP) means a solicitation document containing a description by the State of the individual project for which proposals will be solicited.

1.14. "Technical Proposal" means the Master Contractor's Technical Proposal, dated \_\_\_\_\_ and subsequent clarification responses, vendor discussion handouts and vendor discussion responses, etc. submitted in writing by the Master Contractor.

**2. Statement of Work**

2.1. The Master Contractor shall provide Data Telecommunications Services for the State as described in the RFP, the TO Agreement, and the PORFP, in one or more of the functional area-LATA combinations as follows:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.2. These services shall be provided in accordance with the terms and conditions of this Contract and the following Exhibits, which are attached and incorporated herein by reference. If there are any inconsistencies between this Contract and Exhibits A through G, the terms of this Contract shall control. If there is any conflict among the Exhibits, the following order of precedence shall determine the prevailing provision.

- Exhibit A – Request For Proposal No. F50B4400028
- Exhibit B – Purchase Order (when executed)
- Exhibit C – PORFP (when released)
- Exhibit D – State Contract Affidavit, executed by the Master Contractor and dated \_\_\_\_\_
- Exhibit E – Master Contractor's response to the PORFP (when submitted)
- Exhibit F – Technical Proposal to the RFP
- Exhibit G – Financial Proposal to the RFP

2.3. The Procurement Officer may, at any time, by written order, make changes in the work within the general scope of the Master Contract, the PORFP or the PO. No other order, statement or conduct of the Procurement Officer or any other person shall be treated as a change or entitle the Master Contractor to an equitable adjustment under this section. Except as otherwise provided in this Master Contract, if any change under this section causes an increase or decrease in the Master Contractor's cost of, or the time required for, the performance of any part of the work, whether or not changed by the order, an equitable adjustment in the Master Contract price shall be made and the Master Contract

modified in writing accordingly. The Master Contractor must assert in writing its right to an adjustment under this section within thirty (30) days of receipt of written change order and shall include a written statement setting forth the nature and cost of such claim. No claim by the Master Contractor shall be allowed if asserted after final payment under this Master Contract. Failure to agree to an adjustment under this section shall be a dispute under Section 11, Disputes. Nothing in this section shall excuse the Master Contractor from proceeding with the Master Contract as changed.

### **3. Time for Performance**

The Master Contractor shall provide services, equipment and software in accordance with this Master Contract and any PO issued hereunder. The term of this Master Contract is for a period of about \_\_\_ years, beginning on \_\_\_\_\_, \_\_\_\_\_, and ending December 31, 2026, unless terminated earlier as provided in this Master Contract. All prices for rates and terms as offered in Attachment 1 are binding on the Master Contractor for the term of the Master Contract.

### **4. Consideration and Payment**

4.1. In consideration of the satisfactory performance of the work set forth in this Master Contract and any PO, the State shall pay the Master Contractor in accordance with the rates established in the Master Contractor's PO Proposal which may not exceed the rates and terms of Master Contractor's Financial Proposal. POs that are on a time and materials basis shall include a NTE ceiling for payments. Any work performed by the Master Contractor in excess of the NTE ceiling amount of any PO without the prior written approval of the Contract Manager is at the Master Contractor's risk of non-payment. Payments under POs issued on a fixed price basis shall be limited to the price specified in the PO, regardless of the actual cost to the Master Contractor.

4.2. Invoices must be provided in the format and on the schedule identified in the PORFP. Each invoice must reflect the Master Contractor's federal tax identification number, which is \_\_\_\_\_. The Master Contractor's eMM identification number is \_\_\_\_\_. Payments to the Master Contractor pursuant to this Master Contract shall be made no later than 30 days after the State's receipt of a proper invoice from the Master Contractor. Charges for late payment of invoices, other than as prescribed by Title 15, Subtitle 1, of the State Finance and Procurement Article, Annotated Code of Maryland, are prohibited. A PO Agreement may specify periodic payments based on deliverables or stages of completion. A PO Agreement may specify that a portion of the payments due will be withheld until completion of the PO. The amount withheld from each payment shall be paid to the Master Contractor within thirty (30) days of the State's acceptance of all deliverables required under the PO and receipt from the Master Contractor of a release in a form prescribed by the State for any claims arising out of or related to the PO Agreement. The final payment under this Master Contract will not be made until after certification is received from the Comptroller of the State that all taxes have been paid.

4.3. In addition to any other available remedies if, in the opinion of the Procurement Officer, the Master Contractor fails to perform under this Master Contract in a satisfactory and timely manner, the Procurement Officer may refuse or limit approval of any invoice for payment, and may cause payments to the Master Contractor to be reduced or withheld until such time as the Master Contractor

meets performance standards as established by the Procurement Officer pursuant to this Master Contract.

4.4. The State will use electronic funds transfer to pay the Master Contractor for this Master Contract and any purchase orders issued thereunder and any other State payments due Master Contractor unless the State's Comptroller's Office grants the Master Contractor an exemption.

## **5. PORFPs**

A PORFP may specify terms in addition to the terms specified herein. Such additional terms may include warranties, deliverables, and acceptance test requirements. A PO may not limit the State's rights as provided by law, in this Master Contract, or in the RFP and may not change the terms of this Master Contract or the RFP.

## **6. Patents, Copyrights, Intellectual Property**

6.1. If the Master Contractor furnishes any design, device, material, process, or other item, which is covered by a patent or copyright or which is proprietary to or a trade secret of another, the Master Contractor shall obtain the necessary permission or license to permit the State to use such item or items.

6.2. The Master Contractor agrees that at all times during the term of this Master Contract and thereafter, works created as a deliverable under this Contract and services performed under this Master Contract shall be "works made for hire" as that term is interpreted under U.S. copyright law. To the extent that any products created as a deliverable under this Master Contract are not works for hire for the State, the Master Contractor shall state why it believes that it should not thereby relinquish, transfer, and assign to the State all of its rights, title, and interest (including all intellectual property rights) to all such products created under this Master Contract.

6.3. The Master Contractor shall hold and save harmless the State of Maryland, including, but not limited to, the Department and its agents, officers, and employees, from liability of any nature or kind arising out of a claim or suit for or on account of the use of any copyrighted or uncopyrighted composition, trademark, service mark, secure process, patented or unpatented invention, article or appliance furnished or used in the performance of any Master Contract resulting from this RFP. The Master Contractor agrees to assume the defense of any and all such suits and pay the costs and expenses incidental hereto, subject to the right of the State to provide additional legal counsel at the State's own expense. If a third party claims that a product infringes that party's patent or copyright, the Master Contractor will defend the State against that claim at Master Contractor's expense and will pay all damages, costs and attorney fees that a Court finally awards, provided the State (i) notifies the Master Contractor in writing of the claim within a reasonable time after the State's receipt of such claim, with the understanding that the State's failure to give reasonably timely notice shall not relieve Master Contractor of any obligation hereunder except and to the extent that such failure prejudices Master Contractor's ability to defend against such claim; and (ii) allows Master Contractor to control, and cooperates with Master Contractor in, the defense and any related settlement negotiations.

6.4. If any products furnished by the Master Contractor become, or in the Master Contractor's opinion are likely to become, the subject of a claim of infringement, the Master Contractor shall, after consultation with the State and at the Master Contractor's own expense: (a) procure for the State the right to continue using the applicable item, (b) replace the product with a non-fringing product that, in the State's view, substantially complies with the item's specifications, or (c) modify the item so that it becomes non-infringing and, in the State's view, performs in a substantially similar manner to the original item.

6.5. In connection with services provided under a PORFP, the Master Contractor may create, acquire or otherwise have rights in, and may, employ, provide, create, acquire or otherwise obtain rights in various concepts, ideas, methods, methodologies, procedures, processes, know-how, techniques, models, templates and general purpose consulting and software tools, utilities and routines (collectively, the "Contractor Technology"). To the extent that any Master Contractor Technology is contained in any of the Master Contract deliverables including any derivative works, the Master Contractor grants the State a royalty-free, fully paid, worldwide, perpetual, non-exclusive license to use such Contractor Technology in connection with the Master Contract deliverables for the State's purposes.

6.6. The Master Contractor shall not acquire any right, title and interest in and to the copyrights for goods, any and all software, technical information, specifications, drawings, records, documentation, data or derivative works thereof, or other work products provided by the State to the Master Contractor. In a PORFP, the State may, in its sole discretion, elect to grant the Master Contractor a worldwide, perpetual, non-exclusive license, for which the State may require compensation, perhaps in the form of a royalty, for the Master Contractor's internal use to non-confidential Contract deliverables first originated and prepared by the Master Contractor for delivery to the State.

## **7. Rights to Records**

7.1. The Master Contractor agrees that all documents and materials, including but not limited to, reports, drawings, studies, specifications, estimates, tests, maps, photographs, designs, graphics, mechanical, artwork, computations and data prepared by the Master Contractor for purposes of this Master Contract shall be the sole property of the State and shall be available to the State at any time. The State shall have the right to use the same without restriction and without compensation to the Master Contractor other than that specifically provided by this Master Contract.

7.2. The Master Contractor shall report to the Department, promptly and in written detail, each notice or claim of copyright infringement received by the Master Contractor with respect to all data delivered under this Master Contract.

7.3. The Master Contractor shall not affix any restrictive markings upon any data and if such markings are affixed, the State shall have the right at any time to modify, remove, obliterate, or ignore such warnings.

## **8. Confidentiality**

Subject to the Maryland Public Information Act and any other applicable laws, all confidential or proprietary information and documentation relating to either party (including without limitation, any information or data stored within the Master Contractor's computer systems) shall be held in absolute confidence by the other party. Each party shall, however, be permitted to disclose relevant confidential information to its officers, agents and employees to the extent that such disclosure is necessary for the performance of their duties under this Master Contract, provided the data may be collected, used, disclosed, stored and disseminated only as provided by and consistent with the law. The provisions of this section shall not apply to information that (a) is lawfully in the public domain; (b) has been independently developed by the other party without violation of this Master Contract; (c) was already in the possession of such party; (d) was supplied to such party by a third party lawfully in possession thereof and legally permitted to further disclose the information; or (e) which such party is required to disclose by law.

## **9. Loss of Data**

In the event of loss of any State data or records where such loss is due to the intentional act, omission, or negligence of the Master Contractor or any of its subcontractors or agents, the Master Contractor shall be responsible for recreating such lost data in the manner and on the schedule set by the Master Contract Manager. The Master Contractor shall ensure that all data is backed up and is recoverable by the Master Contractor.

## **10. Non-Hiring of Employees**

No official or employee of the State as defined under State Government Article section 15-102, Annotated Code of Maryland, whose duties as such official or employee include matters relating to or affecting the subject matter of this Master Contract shall, during the pendency and term of this Master Contract and while serving as an official or employee of the State, become or be an employee of the Master Contractor or any entity that is a subcontractor on this Master Contract.

## **11. Disputes**

This Master Contract shall be subject to the provisions of Title 15, Subtitle 2, of the State Finance and Procurement Article of the Annotated Code of Maryland, as and COMAR 21.10 (Administrative and Civil Remedies). Pending resolution of a claim, the Master Contractor shall proceed diligently with the performance of the Master Contract in accordance with the Procurement Officer's decision. Unless a lesser period is provided by applicable statute, regulation, or the Master Contract, the Master Contractor must file a written notice of claim with the Procurement Officer within 30 days after the basis for the claim is known or should have been known, whichever is earlier. Contemporaneously with or within 30 days of the filing of a notice of claim, but no later than the date of final payment under the Master Contract, the Master Contractor must submit to the Procurement Officer its written claim containing the information specified in COMAR 21.10.04.02.

## **12. Maryland Law**

This Master Contract shall be construed, interpreted, and enforced according to the laws of the State of Maryland. The Maryland Uniform Computer Information Transactions Act (Commercial Law Article, Title 22 of the Annotated Code of Maryland) does not apply to this Master Contract or any software license acquired hereunder. Any and all references to the Annotated Code of Maryland contained in this Master Contract shall be construed to refer to such Code sections as from time to time amended.

### **13. Nondiscrimination in Employment**

The Master Contractor agrees: (a) not to discriminate in any manner against an employee or applicant for employment because of race, color, religion, creed, age, sex, marital status, national origin, ancestry, or disability of a qualified individual with a disability; (b) to include a provision similar to that contained in subsection (a), above, in any subcontract except a subcontract for standard commercial supplies or raw materials; and (c) to post and to cause subcontractors to post in conspicuous places available to employees and applicants for employment, notices setting forth the substance of this clause.

### **14. Contingent Fee Prohibition**

The Master Contractor warrants that it has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency working for the Master Contractor to solicit or secure this Master Contract, and that it has not paid or agreed to pay any person, partnership, corporation or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson or commercial selling agency, any fee or other consideration contingent on the making of this Master Contract.

### **15. Non-availability of Funding**

If the General Assembly fails to appropriate funds or if funds are not otherwise made available for continued performance for any fiscal period of a PO under this Master Contract succeeding the first fiscal period, the PO shall be canceled automatically as of the beginning of the fiscal year for which funds were not appropriated or otherwise made available; provided, however, that this will not affect either the State's rights or the Master Contractor's rights under any termination clause in this Master Contract. The effect of termination of the PO hereunder will be to discharge both the Master Contractor and the State from future performance of the PO, but not from their rights and obligations existing at the time of termination. The Master Contractor shall be reimbursed for the reasonable value of any nonrecurring costs incurred but not amortized in the price of the PO. The State shall notify the Master Contractor as soon as it has knowledge that funds may not be available for the continuation of the PO for each succeeding fiscal period beyond the first.

### **16. Termination for Cause**

If the Master Contractor fails to fulfill its obligations under this Master Contract properly and on time, or otherwise violates any provision of the Master Contract, the State may terminate the Master Contract by written notice to the Master Contractor. The notice shall specify the acts or omissions relied upon as cause for termination. All finished or unfinished work provided by the Master

Contractor shall, at the State's option, become the State's property. The State shall pay the Master Contractor fair and equitable compensation for satisfactory performance prior to receipt of notice of termination, less the amount of damages caused by the Master Contractor's breach. If the damages are more than the compensation payable to the Master Contractor, the Master Contractor will remain liable after termination and the State can affirmatively collect damages. Termination hereunder, including the termination of the rights and obligations of the parties, shall be governed by the provisions of COMAR 21.07.01.11B.

#### **17. Termination for Convenience**

The performance of work under this Master Contract may be terminated by the State in accordance with this clause in whole, or from time to time in part, whenever the State shall determine that such termination is in the best interest of the State. The State will pay all reasonable costs associated with this Master Contract that the Master Contractor has incurred up to the date of termination, and all reasonable costs associated with termination of the Master Contract; provided, however, the Master Contractor shall not be reimbursed for any anticipatory profits that have not been earned up to the date of termination. Termination hereunder, including the determination of the rights and obligations of the parties, shall be governed by the provisions of COMAR 21.07.01.12 (A) (2).

#### **18. Delays and Extensions of Time**

The Master Contractor agrees to perform the work under this Master Contract continuously and diligently. No charges or claims for damages shall be made by the Master Contractor for any delays or hindrances from any cause whatsoever during the progress of any portion of the work specified in this Master Contract. Time extensions will be granted only for excusable delays that arise from unforeseeable causes beyond the control and without the fault or negligence of the Master Contractor, including but not restricted to acts of God, acts of the public enemy, acts of the State in either its sovereign or contractual capacity, acts of another contractor in the performance of a contract with the State, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, or delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of either the Master Contractor or the subcontractors or suppliers.

#### **19. Suspension of Work**

The State unilaterally may order the Master Contractor in writing to suspend, delay, or interrupt all or any part of its performance for such period of time as the Procurement Officer or Contract Manager may determine to be appropriate for the convenience of the State.

#### **20. Pre-Existing Regulations**

In accordance with the provisions of Section 11-206 of the State Finance and Procurement Article, Annotated Code of Maryland, the regulations set forth in Title 21 of the Code of Maryland Regulations (COMAR 21) in effect on the date of execution of this Master Contract are applicable to this Master Contract.

**21. Financial Disclosure**

The Master Contractor shall comply with the provisions of Section 13-221 of the State Finance and Procurement Article of the Annotated Code of Maryland, which requires that every business that enters into contracts, leases, or other agreement with the State or its agencies during a calendar year under which the business is to receive in the aggregate \$100,000 or more, shall within 30 days of the time when the aggregate value of these contracts, leases or other agreements reaches \$100,000, file with the Secretary of the State certain specified information to include disclosure of beneficial ownership of the business.

**22. Political Contribution Disclosure**

The Master Contractor shall comply with the Election Law Article, Sections 14-101 through 14-108, of the Annotated Code of Maryland, which requires that every person that enters into contracts, leases, or other agreements with the State, a county or an incorporated municipality or their agencies, during a calendar year under which the person receives in the aggregate \$100,000 or more, shall file with the State Board of Elections a statement disclosing contributions in excess of \$500 made during the reporting period to a candidate for elective office in any primary or general election. The statement shall be filed with the State Board of Elections: (1) before a purchase or execution of a lease or contract by the State, a county, an incorporated municipality, or their agencies, and shall cover the preceding two calendar years; and (2) if the contribution is made after the execution of a lease or contract, then twice a year, throughout the contract term, on: (a) February 5, to cover the 6-month period ending January 31; and (b) August 5, to cover the 6-month period ending July 31.

**23. Retention of Records**

The Master Contractor shall retain and maintain all records and documents in any way relating to this Master Contract for three years after final payment by the State under this Master Contract or any applicable statute of limitations, whichever is longer, and shall make them available for inspection and audit by authorized representatives of the State, including by way of example only, the Procurement Officer or the Procurement Officer's designee, and the Contract Manager or the Contract Manager's designee, at all reasonable times. All records related in any way to the Master Contract are to be retained for the entire time provided under this section. The Master Contractor shall, upon request by the State, surrender all and every copy of documents needed by the State, including, but not limited to itemized billing documentation containing the dates, hours spent and work performed by the Master Contractor and its subcontractors under the Master Contract. The Master Contractor agrees to cooperate fully in any audit conducted by or on behalf of the State, including, by way of example only, making records and employees available as, where, and to the extent requested by the State and by assisting the auditors in reconciling any audit variances. Master Contractor shall not be compensated for providing any such cooperation and assistance. This section shall survive expiration of this Master Contract.

**24. Compliance with Laws**

The Master Contractor hereby represents and warrants that:

24.1. It is qualified to do business in the State of Maryland and that it will take such action as, from time to time hereafter, may be necessary to remain so qualified;

24.2. It is not in arrears with respect to the payment of any monies due and owing the State of Maryland, or any department or unit thereof, including but not limited to the payment of taxes and employee benefits, and that it shall not become so in arrears during the term of this Master Contract;

24.3. It shall comply with all federal, State and local laws, regulations, and ordinances applicable to its activities and obligations under this Master Contract; and

24.4. It shall obtain, at its expense, all licenses, permits, insurance, and governmental approvals, if any, necessary to the performance of its obligations under this Master Contract.

## **25. Costs and Price Certification**

By submitting cost or price information, the Master Contractor certifies to the best of its knowledge that the information submitted is accurate, complete, and current as of the date of the price proposal. The price under this Master Contract and any change order or modification hereunder, including profit or fee, shall be adjusted to exclude any significant price increases occurring because the Master Contractor furnished cost or price information which, as of the date of the financial proposal, was inaccurate, incomplete, or not current.

## **26. Subcontracting; Assignment**

The Master Contractor may not subcontract any portion of the services provided under this Master Contract without obtaining the prior written approval of the Procurement Officer, nor may the Master Contractor assign this Master Contract or any of its rights or obligations hereunder, without the prior written approval of the Procurement Officer, any such approvals to be in the State's sole and absolute subjective discretion; provided however, a Master Contractor may assign monies receivable under a PO after due notice to the State. Any such subcontract or assignment shall include the terms of sections 6, 9 through 24, and 32 of this Master Contract and any other terms and conditions that the State deems necessary to protect its interests. The State shall not be responsible for the fulfillment of the Master Contractor's obligations to the subcontractors.

## **27. Indemnification**

27.1. The Master Contractor shall hold harmless and indemnify the State against liability for any costs, expenses, loss, suits, actions, or claims of any character arising from or relating to the performance of the Master Contractor or its subcontractors under this Master Contract.

27.2. The State has no obligation to provide legal counsel or defense to the Master Contractor or its subcontractors in the event that a suit, claim or action of any character is brought by any person not party to this Master Contract against the Master Contractor or its subcontractors as a result of or relating to the Master Contractor's obligations under this Master Contract.

27.3. The State has no obligation for the payment of any judgments or the settlement of any claims against the Master Contractor or its subcontractors as a result of or relating to the Master Contractor's obligations under this Master Contract.

27.4. The Master Contractor shall immediately notify the Procurement Officer of any claim or suit made or filed against the Master Contractor or its subcontractors regarding any matter resulting from or relating to the Master Contractor's obligations under the Master Contract. In the event that a claim, suit or action is made or filed against the State as a result of or relating to the Master Contractor's performance under this Master Contract, the Master Contractor agrees to assume the defense of any and all such suits and pay the costs and expenses incidental hereto, subject to the right of the State to provide additional legal counsel at the State's own expense. This section shall survive expiration of this Master Contract.

## **28. Limitation of Liability**

For breach of this Master Contract, negligence, misrepresentation or any other contract or tort claim, Master Contractor shall be liable as follows:

A. For infringement of patents, trademarks, trade secrets and copyrights as provided in Section 6 ("Patents, Copyrights, Intellectual Property") of this Master Contract;

B. Without limitation for damages for bodily injury (including death) and damage to real property and tangible personal property;

C. For all other claims, damages, loss, costs, expenses, suits or actions in any way related to this Master Contract, regardless of the form, Master Contractor's liability per claim shall not exceed five (5) times the total amount of the PORFP out of which the claim arises; provided however, the State may, in its sole discretion, decrease the ceiling established hereunder in any PORFP issued pursuant to this RFP. Third party claims arising under Section 27 ("Indemnification") of this Master Contract are included in this limitation of liability only if the State is immune from liability. Master Contractor's liability for third party claims arising under Section 27 of this Master Contract shall be unlimited if the State is not immune from liability for claims arising under Section 27.

## **29. Administrative**

29.1. Procurement Officer. The work to be accomplished under this Master Contract shall be performed under the direction of the Procurement Officer and Contract Manager. All matters relating to the interpretation of this Master Contract shall be referred to the Procurement Officer for determination.

29.2. Notices. All notices hereunder shall be in writing and either delivered personally or sent by certified or registered mail, postage prepaid as follows:

If to the State:

**Data Telecom Services Expansion Window  
Solicitation #: 060B840065**

**RFP Document**

Dapheny McCray  
Maryland Department of Information Technology  
100 Community Place  
Crownsville, Maryland 21032  
[Dapheny.mccray1@maryland.gov](mailto:Dapheny.mccray1@maryland.gov)

If to the Master Contractor:

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**30. Risk of Loss; Transfer of Title.**

Risk of loss for conforming supplies, equipment and materials specified as deliverables to the State hereunder shall remain with the Master Contractor until the supplies, equipment, materials and other deliverables are received by the State. Title of all such deliverables passes to the State upon receipt by the State, subject to the State’s acceptance and payment for the same in accordance with the terms of this Master Contract.

**31. Nonvisual Accessibility Warranty**

The Master Contractor warrants that the information technology offered under the proposal (1) provides equivalent access for effective use by both visual and non-visual means; (2) will present information, including prompts used for interactive communications, in formats intended for both visual and non-visual use; (3) if intended for use in a network, can be integrated into networks for obtaining, retrieving, and disseminating information used by individuals who are not blind or visually impaired; and (4) is available, whenever possible, without modification for compatibility with software and hardware for non-visual access. The Master Contractor further warrants that the cost, if any, of modifying the information technology for compatibility with software and hardware used for non-visual access does not increase the cost of the information technology by more than five percent. For purposes of this Master Contract, the phrase “equivalent access” means the ability to receive, use and manipulate information and operate controls necessary to access and use information technology by non-visual means. Examples of equivalent access include keyboard controls used for input and synthesized speech, Braille, or other audible or tactile means used for output.

**32. Commercial Nondiscrimination**

A. As a condition of entering into this Master Contract, Master Contractor represents and warrants that it will comply with the State’s Commercial Nondiscrimination Policy, as described under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland. As part of such compliance, Master Contractor may not discriminate on the basis of race, color, religion, ancestry or national origin, sex, age, marital status, sexual orientation, or on the basis of disability or other unlawful forms of discrimination in the solicitation, selection, hiring, or commercial treatment of subcontractors, vendors, suppliers, or commercial customers, nor shall Master Contractor retaliate against any person for reporting instances of such discrimination. Master Contractor shall provide

equal opportunity for subcontractors, vendors, and suppliers to participate in all of its public sector and private sector subcontracting and supply opportunities, provided that this clause does not prohibit or limit lawful efforts to remedy the effects of marketplace discrimination that have occurred or are occurring in the marketplace. Master Contractor understands that a material violation of this clause shall be considered a material breach of this Master Contract and may result in termination of this Master Contract, disqualification of Master Contractor from participating in State contracts, or other sanctions. This clause is not enforceable by or for the benefit of, and creates no obligation to, any third party.

B. The Master Contractor shall include the above Commercial Nondiscrimination clause, or similar clause approved by DBM, in all subcontracts.

C. As a condition of entering into this Master Contract, upon the Maryland Human Relations Commission's request, and only after the filing of a complaint against Master Contractor under Title 19 of the State Finance and Procurement Article, Master Contractor agrees to provide within 60 days after the request a complete list of the names of all subcontractors, vendors, and suppliers that Master Contractor has used in the past 4 years on any of its contracts that were undertaken within the State, including the total dollar amount paid by Master Contractor on each subcontract or supply contract. Master Contractor further agrees to cooperate in any investigation conducted by the State pursuant to the State's Commercial Nondiscrimination Policy as set forth under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland, and to provide any documents relevant to any investigation that is requested by the State. Master Contractor understands that violation of this clause is a material breach of this Master Contract and may result in contract termination, disqualification by the State from participating in State contracts, and other sanctions.

### **33. Prompt Pay Requirements**

33.1. If a Master Contractor withholds payment of an undisputed amount to its subcontractor, the Agency, at its option and in its sole discretion, may take one or more of the following actions:

33.1.1. Not process further payments to the Master Contractor until payment to the subcontractor is verified

33.1.2. Suspend all or some of the contract work without affecting the completion date(s) for the contract work;

33.1.3. Pay or cause payment of the undisputed amount to the subcontractor from monies otherwise due or that may become due;

33.1.4. Place a payment for an undisputed amount in an interest-bearing escrow account; or

33.1.5. Take other or further actions as appropriate to resolve the withheld payment.

33.2. An "undisputed amount" means an amount owed by a contractor to a subcontractor for which there is no good faith dispute. Such "undisputed amounts" include (a) retainage which had been

withheld and is, by the terms of the agreement between the contractor and subcontractor, due to be distributed to the subcontractor and (b) an amount withheld because of issues arising out of an agreement or occurrence unrelated to the agreement under which the amount is withheld.

33.3. An act, failure to act, or decision of a procurement officer or a representative of the Agency, concerning a withheld payment between a contractor and subcontractor under this policy directive, may not:

33.3.1. Affect the rights of the contracting parties under any other provision of law;

33.3.2. Be used as evidence on the merits of a dispute between the Agency and the contractor in any other proceeding; or

33.3.3. Result in liability against or prejudice the rights of the Agency.

33.4. The remedies enumerated above are in addition to those provided under COMAR 21.11.03.13 with respect to subcontractors that have contracted pursuant to the Minority Business Enterprise program.

33.5. To ensure compliance with certified MBE subcontract participation goals, the Agency may, consistent with COMAR 21.11.03.13, take the following measures:

33.5.1. Verify that the certified MBEs listed in the MBE participation schedule actually are performing work and receiving compensation as set forth in the MBE participation schedule.

33.5.2. This verification may include, as appropriate:

33.5.2.1. Inspecting any relevant records of the contractor;

33.5.2.2. Inspecting the jobsite; and

33.5.2.3. Interviewing subcontractors and workers.

33.5.2.4. Verification shall include a review of:

33.5.2.4.1. The contractor's monthly report listing unpaid invoices over 30 days old from certified MBE subcontractors and the reason for nonpayment; and

33.5.2.4.2. The monthly report of each certified MBE subcontractor, which lists payments received from the contractor in the preceding 30 days and invoices for which the subcontractor has not been paid.

33.6. If the Agency determines that a contractor is in noncompliance with certified MBE participation goals, then the Agency will notify the contractor in writing of its findings, and will require the contractor to take appropriate corrective action. Corrective action may include, but is not

limited to, requiring the contractor to compensate the MBE for work performed as set forth in the MBE participation schedule.

33.6.1. If the Agency determines that a contractor is in material noncompliance with MBE contract provisions and refuses or fails to take the corrective action that the Agency requires, then the Agency may:

33.6.2. Terminate the contract;

33.6.3. Refer the matter to the Office of the Attorney General for appropriate action; or

33.6.4. Initiate any other specific remedy identified by the contract, including the contractual remedies required by this Directive regarding the payment of undisputed amounts.

33.6.5. Upon completion of the contract, but before final payment or release of retainage or both, the contractor shall submit a final report, in affidavit form under the penalty of perjury, of all payments made to, or withheld from MBE subcontractors.

#### **34. Parent Company Guarantee (If Applicable)**

[Corporate name of Parent Company] hereby guarantees absolutely the full, prompt and complete performance by "[Master Contractor]" of all the terms, conditions and obligations contained in this Master Contract, as it may be amended from time to time, including any and all exhibits that are now or may become incorporated hereunto, and other obligations of every nature and kind that now or may in the future arise out of or in connection with this Master Contract, including any and all financial commitments, obligations and liabilities. "[Corporate name of Parent Company]" may not transfer this absolute guaranty to any other person or entity without the prior express written approval of the State, which approval the State may grant, withhold, or qualify in its sole and absolute subjective discretion. "[Corporate name of Parent Company]" further agrees that if the State brings any claim, action, suit or proceeding against "[Master Contractor]", "[Corporate name of Parent Company]" may be named as a party, in its capacity as Absolute Guarantor.

#### **35. Living Wage**

If a Contractor subject to the Living Wage law fails to submit all records required under COMAR 21.11.10.05 to the Commissioner of Labor and Industry at the Department of Labor, Licensing and Regulation, the agency may withhold payment of any invoice or retainage. The agency may require certification from the Commissioner on a quarterly basis that such records were properly submitted.

IN WITNESS THEREOF, the parties have executed this Master Contract as of the date hereinabove set forth.

MASTER CONTRACTOR

**Data Telecom Services Expansion Window  
Solicitation #: 060B8400065**

**RFP Document**

By \_\_\_\_\_

Date \_\_\_\_\_

Witness/Attest: \_\_\_\_\_

**DEPARTMENT OF INFORMATION TECHNOLOGY**

By \_\_\_\_\_

Date \_\_\_\_\_

Witness: \_\_\_\_\_

Approved for form and legal sufficiency this \_\_\_\_\_ day of \_\_\_\_\_, 20

\_\_\_\_\_  
Assistant Attorney General

APPROVED BY BPW: \_\_\_\_\_  
(Date) (BPW Item #)

**ATTACHMENT 3 BID PROPOSAL AFFIDAVIT**

**A. AUTHORITY**

I HEREBY AFFIRM THAT:

I (print name) \_\_\_\_\_ possess the legal authority to make this Affidavit.

**B. CERTIFICATION REGARDING COMMERCIAL NONDISCRIMINATION**

The undersigned bidder hereby certifies and agrees that the following information is correct: In preparing its bid on this project, the bidder has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not engaged in "discrimination" as defined in §19-103 of the State Finance and Procurement Article of the Annotated Code of Maryland. "Discrimination" means any disadvantage, difference, distinction, or preference in the solicitation, selection, hiring, or commercial treatment of a vendor, subcontractor, or commercial customer on the basis of race, color, religion, ancestry, or national origin, sex, age, marital status, sexual orientation, or on the basis of disability or any otherwise unlawful use of characteristics regarding the vendor's, supplier's, or commercial customer's employees or owners. "Discrimination" also includes retaliating against any person or other entity for reporting any incident of "discrimination". Without limiting any other provision of the solicitation on this project, it is understood that, if the certification is false, such false certification constitutes grounds for the State to reject the bid submitted by the bidder on this project, and terminate any contract awarded based on the bid. As part of its bid or proposal, the bidder herewith submits a list of all instances within the past 4 years where there has been a final adjudicated determination in a legal or administrative proceeding in the State of Maryland that the bidder discriminated against subcontractors, vendors, suppliers, or commercial customers, and a description of the status or resolution of that determination, including any remedial action taken. Bidder agrees to comply in all respects with the State's Commercial Nondiscrimination Policy as described under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland.

**B-1. CERTIFICATION REGARDING MINORITY BUSINESS ENTERPRISES.**

The undersigned bidder hereby certifies and agrees that it has fully complied with the State Minority Business Enterprise Law, State Finance and Procurement Article, §14-308(a)(2), Annotated Code of Maryland, which provides that, except as otherwise provided by law, a contractor may not identify a certified minority business enterprise in a bid or proposal and:

- (1) Fail to request, receive, or otherwise obtain authorization from the certified minority business enterprise to identify the certified minority proposal;
- (2) Fail to notify the certified minority business enterprise before execution of the contract of its inclusion in the bid or proposal;
- (3) Fail to use the certified minority business enterprise in the performance of the contract; or
- (4) Pay the certified minority business enterprise solely for the use of its name in the bid or proposal.

Without limiting any other provision of the solicitation on this project, it is understood that if the certification is false, such false certification constitutes grounds for the State to reject the bid submitted by the bidder on this project, and terminate any contract awarded based on the bid.

**B-2. CERTIFICATION REGARDING VETERAN-OWNED SMALL BUSINESS ENTERPRISES.**

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Solicitation #: 060B840065**

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The undersigned bidder hereby certifies and agrees that it has fully complied with the State veteran-owned small business enterprise law, State Finance and Procurement Article, §14-605, Annotated Code of Maryland, which provides that a person may not:

- (1) Knowingly and with intent to defraud, fraudulently obtain, attempt to obtain, or aid another person in fraudulently obtaining or attempting to obtain public money, procurement contracts, or funds expended under a procurement contract to which the person is not entitled under this title;
- (2) Knowingly and with intent to defraud, fraudulently represent participation of a veteran-owned small business enterprise in order to obtain or retain a bid preference or a procurement contract;
- (3) Willfully and knowingly make or subscribe to any statement, declaration, or other document that is fraudulent or false as to any material matter, whether or not that falsity or fraud is committed with the knowledge or consent of the person authorized or required to present the declaration, statement, or document;
- (4) Willfully and knowingly aid, assist in, procure, counsel, or advise the preparation or presentation of a declaration, statement, or other document that is fraudulent or false as to any material matter, regardless of whether that falsity or fraud is committed with the knowledge or consent of the person authorized or required to present the declaration, statement, or document;
- (5) Willfully and knowingly fail to file any declaration or notice with the unit that is required by COMAR 21.11.12; or
- (6) Establish, knowingly aid in the establishment of, or exercise control over a business found to have violated a provision of §B-2(1)—(5) of this regulation.

**C. AFFIRMATION REGARDING BRIBERY CONVICTIONS**

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business (as is defined in Section 16-101(b) of the State Finance and Procurement Article of the Annotated Code of Maryland), or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies has been convicted of, or has had probation before judgment imposed pursuant to Criminal Procedure Article, §6-220, Annotated Code of Maryland, or has pleaded nolo contendere to a charge of, bribery, attempted bribery, or conspiracy to bribe in violation of Maryland law, or of the law of any other state or federal law, except as follows (indicate the reasons why the affirmation cannot be given and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of person(s) involved, and their current positions and responsibilities with the business):

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**D. AFFIRMATION REGARDING OTHER CONVICTIONS**

I FURTHER AFFIRM THAT:

**Data Telecom Services Expansion Window  
Solicitation #: 060B8400065**

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Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies, has:

- (1) Been convicted under state or federal statute of:
  - (a) A criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract; or
  - (b) Fraud, embezzlement, theft, forgery, falsification or destruction of records or receiving stolen property;
- (2) Been convicted of any criminal violation of a state or federal antitrust statute;
- (3) Been convicted under the provisions of Title 18 of the United States Code for violation of the Racketeer Influenced and Corrupt Organization Act, 18 U.S.C. §1961 et seq., or the Mail Fraud Act, 18 U.S.C. §1341 et seq., for acts in connection with the submission of bids or proposals for a public or private contract;
- (4) Been convicted of a violation of the State Minority Business Enterprise Law, §14-308 of the State Finance and Procurement Article of the Annotated Code of Maryland;
- (5) Been convicted of a violation of §11-205.1 of the State Finance and Procurement Article of the Annotated Code of Maryland;
- (6) Been convicted of conspiracy to commit any act or omission that would constitute grounds for conviction or liability under any law or statute described in subsections (1)–(5) above;
- (7) Been found civilly liable under a state or federal antitrust statute for acts or omissions in connection with the submission of bids or proposals for a public or private contract;
- (8) Been found in a final adjudicated decision to have violated the Commercial Nondiscrimination Policy under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland with regard to a public or private contract; or
- (9) Admitted in writing or under oath, during the course of an official investigation or other proceedings, acts or omissions that would constitute grounds for conviction or liability under any law or statute described in §§B and C and subsections D(1)–(8) above, except as follows (indicate reasons why the affirmations cannot be given, and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of the person(s) involved and their current positions and responsibilities with the business, and the status of any debarment):

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**E. AFFIRMATION REGARDING DEBARMENT**

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities, including obtaining or performing contracts with public bodies, has ever been suspended or debarred (including being issued a limited

**Data Telecom Services Expansion Window  
Solicitation #: 060B8400065**

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denial of participation) by any public entity, except as follows (list each debarment or suspension providing the dates of the suspension or debarment, the name of the public entity and the status of the proceedings, the name(s) of the person(s) involved and their current positions and responsibilities with the business, the grounds of the debarment or suspension, and the details of each person's involvement in any activity that formed the grounds of the debarment or suspension).

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**F. AFFIRMATION REGARDING DEBARMENT OF RELATED ENTITIES**

I FURTHER AFFIRM THAT:

- (1) The business was not established and it does not operate in a manner designed to evade the application of or defeat the purpose of debarment pursuant to Sections 16-101, et seq., of the State Finance and Procurement Article of the Annotated Code of Maryland; and
- (2) The business is not a successor, assignee, subsidiary, or affiliate of a suspended or debarred business, except as follows (you must indicate the reasons why the affirmations cannot be given without qualification):

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**G. SUB-CONTRACT AFFIRMATION**

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, has knowingly entered into a contract with a public body under which a person debarred or suspended under Title 16 of the State Finance and Procurement Article of the Annotated Code of Maryland will provide, directly or indirectly, supplies, services, architectural services, construction related services, leases of real property, or construction.

**H. AFFIRMATION REGARDING COLLUSION**

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business has:

- (1) Agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the accompanying bid or offer that is being submitted;
- (2) In any manner, directly or indirectly, entered into any agreement of any kind to fix the bid price or price proposal of the bidder or offeror or of any competitor, or otherwise taken any action in restraint of free competitive bidding in connection with the contract for which the accompanying bid or offer is submitted.

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**I. CERTIFICATION OF TAX PAYMENT**

I FURTHER AFFIRM THAT: Except as validly contested, the business has paid, or has arranged for payment of, all taxes due the State of Maryland and has filed all required returns and reports with the Comptroller of the Treasury, the State Department of Assessments and Taxation, and the Department of Labor, Licensing, and Regulation, as applicable, and will have paid all withholding taxes due the State of Maryland prior to final settlement.

**J. CONTINGENT FEES**

I FURTHER AFFIRM THAT:

The business has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency working for the business, to solicit or secure the Contract, and that the business has not paid or agreed to pay any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency, any fee or any other consideration contingent on the making of the Contract.

**K. CERTIFICATION REGARDING INVESTMENTS IN IRAN**

(1) The undersigned certifies that, in accordance with State Finance and Procurement Article, §17-705, Annotated Code of Maryland:

(a) It is not identified on the list created by the Board of Public Works as a person engaging in investment activities in Iran as described in State Finance and Procurement Article, §17-702, Annotated Code of Maryland; and

(b) It is not engaging in investment activities in Iran as described in State Finance and Procurement Article, §17-702, Annotated Code of Maryland.

2. The undersigned is unable to make the above certification regarding its investment activities in Iran due to the following activities: \_\_\_\_\_

**L. CONFLICT MINERALS ORIGINATED IN THE DEMOCRATIC REPUBLIC OF CONGO (FOR SUPPLIES AND SERVICES CONTRACTS)**

I FURTHER AFFIRM THAT:

The business has complied with the provisions of State Finance and Procurement Article, §14-413, Annotated Code of Maryland governing proper disclosure of certain information regarding conflict minerals originating in the Democratic Republic of Congo or its neighboring countries as required by federal law.

**M. ACKNOWLEDGEMENT**

I ACKNOWLEDGE THAT this Affidavit is to be furnished to the Procurement Officer and may be distributed to units of: (1) the State of Maryland; (2) counties or other subdivisions of the State of Maryland; (3) other states; and (4) the federal government. I further acknowledge that this Affidavit is subject to applicable laws of the United States and the State of Maryland, both criminal and civil, and that nothing in this Affidavit or any contract resulting from the submission of this bid or proposal shall be construed to supersede, amend, modify or waive, on behalf of the State of Maryland, or any unit of the State of Maryland having jurisdiction, the exercise of any statutory right or remedy conferred by the Constitution and the laws of Maryland with respect to any misrepresentation made or any violation of the obligations, terms and covenants undertaken by the above business with respect to (1) this Affidavit, (2) the contract, and (3) other Affidavits comprising part of the contract.

**Data Telecom Services Expansion Window**  
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I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date: \_\_\_\_\_

By: \_\_\_\_\_ (print name of Authorized Representative and Affiant)

\_\_\_\_\_ (signature of Authorized Representative and Affiant)

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**ATTACHMENT 4 MINORITY BUSINESS ENTERPRISE FORMS**

NOT APPLICABLE TO THIS RFP

**ATTACHMENT 5 CONTRACT AFFIDAVIT**

21.07.01.25

**A. AUTHORITY**

I HEREBY AFFIRM THAT:

I, \_\_\_\_\_ (print name), possess the legal authority to make this Affidavit.

**B. CERTIFICATION OF REGISTRATION OR QUALIFICATION WITH THE STATE  
DEPARTMENT OF ASSESSMENTS AND TAXATION**

I FURTHER AFFIRM THAT:

The business named above is a (check applicable box):

- (1) Corporation —  domestic or  foreign;
- (2) Limited Liability Company —  domestic or  foreign;
- (3) Partnership —  domestic or  foreign;
- (4) Statutory Trust —  domestic or  foreign;
- (5)  Sole Proprietorship.

and is registered or qualified as required under Maryland Law. I further affirm that the above business is in good standing both in Maryland and (IF APPLICABLE) in the jurisdiction where it is presently organized, and has filed all of its annual reports, together with filing fees, with the Maryland State Department of Assessments and Taxation. The name and address of its resident agent (IF APPLICABLE) filed with the State Department of Assessments and Taxation is:

*Name and Department ID Number:* \_\_\_\_\_

*Address:* \_\_\_\_\_

and that if it does business under a trade name, it has filed a certificate with the State Department of Assessments and Taxation that correctly identifies that true name and address of the principal or owner as:

*Name and Department ID Number:* \_\_\_\_\_

*Address:* \_\_\_\_\_

**C. FINANCIAL DISCLOSURE AFFIRMATION**

I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, the provisions of State Finance and Procurement Article, §13-221, Annotated Code of Maryland, which require that every business that enters into contracts, leases, or other agreements with the State of Maryland or its agencies during a

calendar year under which the business is to receive in the aggregate \$100,000 or more shall, within 30 days of the time when the aggregate value of the contracts, leases, or other agreements reaches \$100,000, file with the Secretary of State of Maryland certain specified information to include disclosure of beneficial ownership of the business.

#### D. POLITICAL CONTRIBUTION DISCLOSURE AFFIRMATION

##### I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, Election Law Article, §§14-101 — 14-108, Annotated Code of Maryland, which requires that every person that enters into contracts, leases, or other agreements with the State of Maryland, including its agencies or a political subdivision of the State, during a calendar year in which the person receives in the aggregate \$100,000 or more shall file with the State Board of Elections a statement disclosing contributions in excess of \$500 made during the reporting period to a candidate for elective office in any primary or general election.

#### E. DRUG AND ALCOHOL FREE WORKPLACE

(Applicable to all contracts unless the contract is for a law enforcement agency and the agency head or the agency head's designee has determined that application of COMAR 21.11.08 and this certification would be inappropriate in connection with the law enforcement agency's undercover operations.)

##### I CERTIFY THAT:

(1) Terms defined in COMAR 21.11.08 shall have the same meanings when used in this certification.

(2) By submission of its bid or offer, the business, if other than an individual, certifies and agrees that, with respect to its employees to be employed under a contract resulting from this solicitation, the business shall:

- (a) Maintain a workplace free of drug and alcohol abuse during the term of the contract;
- (b) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of drugs, and the abuse of drugs or alcohol is prohibited in the business' workplace and specifying the actions that will be taken against employees for violation of these prohibitions;
- (c) Prohibit its employees from working under the influence of drugs or alcohol;
- (d) Not hire or assign to work on the contract anyone who the business knows, or in the exercise of due diligence should know, currently abuses drugs or alcohol and is not actively engaged in a bona fide drug or alcohol abuse assistance or rehabilitation program;
- (e) Promptly inform the appropriate law enforcement agency of every drug-related crime that occurs in its workplace if the business has observed the violation or otherwise has reliable information that a violation has occurred;
- (f) Establish drug and alcohol abuse awareness programs to inform its employees about:
  - (i) The dangers of drug and alcohol abuse in the workplace;

- (ii) The business's policy of maintaining a drug and alcohol free workplace;
  - (iii) Any available drug and alcohol counseling, rehabilitation, and employee assistance programs; and
  - (iv) The penalties that may be imposed upon employees who abuse drugs and alcohol in the workplace;
- (g) Provide all employees engaged in the performance of the contract with a copy of the statement required by §E(2)(b), above;
- (h) Notify its employees in the statement required by §E(2)(b), above, that as a condition of continued employment on the contract, the employee shall:
- (i) Abide by the terms of the statement; and
  - (ii) Notify the employer of any criminal drug or alcohol abuse conviction for an offense occurring in the workplace not later than 5 days after a conviction;
- (i) Notify the procurement officer within 10 days after receiving notice under §E(2)(h)(ii), above, or otherwise receiving actual notice of a conviction;
- (j) Within 30 days after receiving notice under §E(2)(h)(ii), above, or otherwise receiving actual notice of a conviction, impose either of the following sanctions or remedial measures on any employee who is convicted of a drug or alcohol abuse offense occurring in the workplace:
- (i) Take appropriate personnel action against an employee, up to and including termination; or
  - (ii) Require an employee to satisfactorily participate in a bona fide drug or alcohol abuse assistance or rehabilitation program; and
- (k) Make a good faith effort to maintain a drug and alcohol free workplace through implementation of §E(2)(a)—(j), above.
- (3) If the business is an individual, the individual shall certify and agree as set forth in §E(4), below, that the individual shall not engage in the unlawful manufacture, distribution, dispensing, possession, or use of drugs or the abuse of drugs or alcohol in the performance of the contract.
- (4) I acknowledge and agree that:
- (a) The award of the contract is conditional upon compliance with COMAR 21.11.08 and this certification;
  - (b) The violation of the provisions of COMAR 21.11.08 or this certification shall be cause to suspend payments under, or terminate the contract for default under COMAR 21.07.01.11 or 21.07.03.15, as applicable; and
  - (c) The violation of the provisions of COMAR 21.11.08 or this certification in connection with the contract may, in the exercise of the discretion of the Board of Public Works, result in suspension and debarment of the business under COMAR 21.08.03.

**F. CERTAIN AFFIRMATIONS VALID**

**Data Telecom Services Expansion Window**  
**Solicitation #: 060B8400065**

**RFP Document**

I FURTHER AFFIRM THAT:

To the best of my knowledge, information, and belief, each of the affirmations, certifications, or acknowledgements contained in that certain Bid/Proposal Affidavit dated \_\_\_\_\_, 20\_\_\_\_, and executed by me for the purpose of obtaining the contract to which this Exhibit is attached remains true and correct in all respects as if made as of the date of this Contract Affidavit and as if fully set forth herein.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date: \_\_\_\_\_

By: \_\_\_\_\_ (printed name of Authorized Representative and Affiant)

\_\_\_\_\_ (signature of Authorized Representative and Affiant)

Effective August 8, 2011

**ATTACHMENT 6 CONFLICT OF INTEREST AFFIDAVIT AND DISCLOSURE**

- A) "Conflict of interest" means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the State, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage.
- B) "Person" has the meaning stated in COMAR 21.01.02.01B(64) and includes a bidder, offeror, contractor, consultant, or subcontractor or sub-consultant at any tier, and also includes an employee or agent of any of them if the employee or agent has or will have the authority to control or supervise all or a portion of the work for which a bid or offer is made.
- C) The bidder or offeror warrants that, except as disclosed in §D, below, there are no relevant facts or circumstances now giving rise or which could, in the future, give rise to a conflict of interest.
- D) The following facts or circumstances give rise or could in the future give rise to a conflict of interest (explain in detail—attach additional sheets if necessary):
- E) The bidder or offeror agrees that if an actual or potential conflict of interest arises after the date of this affidavit, the bidder or offeror shall immediately make a full disclosure in writing to the procurement officer of all relevant facts and circumstances. This disclosure shall include a description of actions which the bidder or offeror has taken and proposes to take to avoid, mitigate, or neutralize the actual or potential conflict of interest. If the contract has been awarded and performance of the contract has begun, the Contractor shall continue performance until notified by the procurement officer of any contrary action to be taken.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date: \_\_\_\_\_ By: \_\_\_\_\_

(Authorized Representative and Affiant)

SUBMIT AS INSTRUCTED IN RFP.

**Data Telecom Services Expansion Window  
Solicitation #: 060B8400065**

**RFP Document**

**ATTACHMENT 7 PRE-PROPOSAL RESPONSE FORM**

Project No. F50B4400028 – Expansion Window #1

Project Title: Data Telecommunications Services

A pre-proposal conference will be held on April 17, 2018; at 10:30 am/pm at:

Department of Information Technology  
100 Community Place  
Crownsville, Maryland 20132  
Room # DoIT-CWN-CR-4.102 \_\_

Email this form no later than 1:00 PM on April 12, 2018 to the Procurement Officer listed on the Key Information Summary Sheet. Attendees with special needs must contact the Procurement Officer as instructed in the RFP Section 1.9.

Please indicate:

\_\_\_\_\_ Yes, the following representatives will be in attendance (Limit 2 per company):

- 1.
- 2.

\_\_\_\_\_ No, although we plan to propose to the Data Telecommunications Services RFP, we will not be in attendance.

\_\_\_\_\_ No, we will not be attending.

\_\_\_\_\_  
Company/Firm/Offeror Name

\_\_\_\_\_  
Contract Name & Telephone

## **ATTACHMENT 8 PRE-PROPOSAL CONFERENCE DIRECTIONS**

**From Baltimore:** Follow the Beltway (I-695) to Exit 4, I-97 towards Annapolis, 11 miles to Exit 5, Route 178. Two miles, to right on Crownsville Road, then immediately right onto Fairfield Loop Road, and left into the People's Resource Center at 100 Community Place.

**From Columbia:** Follow Route 32 east to I-97 south towards Annapolis. Take first exit (Exit 5), Route 178 (towards Crownsville). Two miles, to right on Crownsville Road, then immediately right onto Fairfield Loop Road, and left into the People's Resource Center at 100 Community Place.

**From Washington:** Follow the Beltway (I-495/95) to U.S. Route 50 east towards Annapolis (18 miles) to Route 450. Turn right towards Crownsville. Continue straight (becomes Route 178) for 4.5 miles to left on Crownsville Road, then immediately right onto Fairfield Loop Road, and left into the People's Resource Center at 100 Community Place.

**From Annapolis:** Follow Rowe Boulevard to Bestgate Road to end. Right on Route 178 for 4 miles to left on Crownsville Road, then immediately right onto Fairfield Loop Road, and left into the People's Resource Center at 100 Community Place.

**Data Telecom Services Expansion Window  
Solicitation #: 060B8400065****RFP Document****Living Wage Requirements for Service Contracts**

- A) This contract is subject to the Living Wage requirements under Title 18, State Finance and Procurement Article, Annotated Code of Maryland and the regulations proposed by the Commissioner of Labor and Industry. The Living Wage generally applies to a Contractor or Subcontractor who performs work on a State contract for services that is valued at \$100,000 or more. An employee is subject to the Living Wage if he/she is at least 18 years old or will turn 18 during the duration of the contract; works at least 13 consecutive weeks on the State Contract and spends at least one-half of the employee's time during any work week on the State Contract.
- B) The Living Wage Law does not apply to:
- 1) A Contractor who:
    - a) Has a State contract for services valued at less than \$100,000, or
    - b) Employs 10 or fewer employees and has a State contract for services valued at less than \$500,000.
  - 2) A Subcontractor who:
    - a) Performs work on a State contract for services valued at less than \$100,000,
    - b) Employs 10 or fewer employees and performs work on a State contract for services valued at less than \$500,000, or
    - c) Performs work for a Contractor not covered by the Living Wage Law as defined in B(1)(B) above, or B(3) or C below.
  - 3) Service contracts for the following:
    - a) Services with a Public Service Company;
    - b) Services with a nonprofit organization;
    - c) Services with an officer or other entity that is in the Executive Branch of the State government and is authorized by law to enter into a procurement ("Unit"); or
    - d) Services between a Unit and a County or Baltimore City.
- C) If the Unit responsible for the State contract for services determines that application of the Living Wage would conflict with any applicable Federal program, the Living Wage does not apply to the contract or program.
- D) A Contractor shall not split or subdivide a State contract for services, pay an employee through a third party, or treat an employee as an independent Contractor or assign work to employees to avoid the imposition of any of the requirements of Title 18, State Finance and Procurement, Annotated Code of Maryland.
- E) Each Contractor/Subcontractor, subject to the Living Wage Law, shall post in a prominent and easily accessible place at the work site(s) of covered employees a notice of the Living Wage Rates, employee rights under the law, and the name, address, and telephone number of the Commissioner.
- F) The Commissioner of Labor and Industry shall adjust the wage rates by the annual average increase or decrease, if any, in the Consumer Price Index for all urban consumers for the Washington/Baltimore metropolitan area, or any successor index, for the previous calendar year, not later than 90 days after the start of each fiscal year. The Commissioner shall publish any adjustments to the wage rates on the Division of Labor and Industry's website. An employer subject to the Living Wage Law must comply with the rate requirements during the initial term of the contract and all subsequent renewal periods, including any increases in the wage rate, required by the Commissioner, automatically upon the effective date of the revised wage rate.
- G) A Contractor/Subcontractor who reduces the wages paid to an employee based on the employer's share of the health insurance premium, as provided in §18-103(c), State Finance and Procurement Article, Annotated Code of Maryland, shall not lower an employee's wage rate below the minimum wage as set in §3-413, Labor and Employment Article, Annotated Code of Maryland. A Contractor/Subcontractor who reduces the wages paid to an employee based on the employer's share of health insurance premium shall comply with any record reporting requirements established by the Commissioner of Labor and Industry.
- H) A Contractor/Subcontractor may reduce the wage rates paid under §18-103(a), State Finance and Procurement, Annotated Code of Maryland, by no more than 50 cents of the hourly cost of the employer's contribution to an employee's deferred compensation plan. A Contractor/Subcontractor who reduces the wages paid to an employee based on the employer's contribution to an employee's deferred compensation plan shall not lower the employee's wage rate below the minimum wage as set in §3-413, Labor and Employment Article, Annotated Code of Maryland.
- I) Under Title 18, State and Finance Procurement Article, Annotated Code of Maryland, if the Commissioner determines that the Contractor/Subcontractor violated a provision of this title or regulations of the Commissioner, the Contractor/Subcontractor shall

**Data Telecom Services Expansion Window**  
**Solicitation #: 060B840065**

**RFP Document**

pay restitution to each affected employee, and the State may assess liquidated damages of \$20 per day for each employee paid less than the Living Wage.

- J) Information pertaining to reporting obligations may be found by going to the DLLR website <http://www.dllr.state.md.us/> and clicking on Living Wage.

**Data Telecom Services Expansion Window**  
**Solicitation #: 060B8400065**

**RFP Document**

**ATTACHMENT 9 LIVING WAGE AFFIDAVIT OF AGREEMENT**

Contract No. \_\_\_\_\_  
Name of Contractor \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

**If the Contract is Exempt from the Living Wage Law**

The Undersigned, being an authorized representative of the above named Contractor, hereby affirms that the Contract is exempt from Maryland's Living Wage Law for the following reasons: (check all that apply)

- Bidder/Offeror is a nonprofit organization
- Bidder/Offeror is a public service company
- Bidder/Offeror employs 10 or fewer employees and the proposed contract value is less than \$500,000
- Bidder/Offeror employs more than 10 employees and the proposed contract value is less than \$100,000

**If the Contract is a Living Wage Contract**

A. The Undersigned, being an authorized representative of the above named Contractor, hereby affirms our commitment to comply with Title 18, State Finance and Procurement Article, Annotated Code of Maryland and, if required, to submit all payroll reports to the Commissioner of Labor and Industry with regard to the above stated contract. The Bidder/Offeror agrees to pay covered employees who are subject to living wage at least the living wage rate in effect at the time service is provided for hours spent on State contract activities, and to ensure that its Subcontractors who are not exempt also pay the required living wage rate to their covered employees who are subject to the living wage for hours spent on a State contract for services. The Contractor agrees to comply with, and ensure its Subcontractors comply with, the rate requirements during the initial term of the contract and all subsequent renewal periods, including any increases in the wage rate established by the Commissioner of Labor and Industry, automatically upon the effective date of the revised wage rate.

B. \_\_\_\_\_ (initial here if applicable) The Bidder/Offeror affirms it has no covered employees for the following reasons (check all that apply):

- All employee(s) proposed to work on the State contract will spend less than one-half of the employee's time during every work week on the State contract;
- All employee(s) proposed to work on the State contract will be 17 years of age or younger during the duration of the State contract; or
- All employee(s) proposed to work on the State contract will work less than 13 consecutive weeks on the State contract.

The Commissioner of Labor and Industry reserves the right to request payroll records and other data that the Commissioner deems sufficient to confirm these affirmations at any time.

Name of Authorized Representative: \_\_\_\_\_

Signature of Authorized Representative: \_\_\_\_\_

Date: \_\_\_\_\_ Title: \_\_\_\_\_

Witness Name (Typed or Printed): \_\_\_\_\_

Witness Signature & Date: \_\_\_\_\_

**ATTACHMENT 10 NON-DISCLOSURE AGREEMENT (OFFEROR)**

NOT APPLICABLE TO THIS RFP

**ATTACHMENT 11 NON-DISCLOSURE AGREEMENT (CONTRACTOR)**

NOT APPLICABLE TO THIS RFP

**ATTACHMENT 12 MERCURY AFFIDAVIT**

**AUTHORIZED REPRESENTATIVE THEREBY AFFIRM THAT:**

I am the \_\_\_\_\_ (Title) and the duly authorized representative of \_\_\_\_\_ (Business). I possess the legal authority to make this affidavit on behalf of myself and the business for which I am acting.

**MERCURY CONTENT INFORMATION:**

The product(s) offered do not contain mercury.

**OR**

The product(s) offered do contain mercury.

- (1) Describe the product or product component that contains mercury.
- (2) Provide the amount of mercury that is contained in the product or product component. Indicate the unit of measure being used.

I ACKNOWLEDGE THAT this affidavit is to be furnished to the procurement officer and may be distributed to units of (1) the State of Maryland; (2) counties or other subdivisions of the State of Maryland; (3) other states; and (4) the federal government. I further acknowledge that this Affidavit is subject to applicable laws of the United States and the State of Maryland, both criminal and civil, and that nothing in this affidavit or any contract resulting from the submission of this bid or proposal shall be construed to supersede, amend, modify, or waive, on behalf of the State of Maryland, or any unit of the State of Maryland having jurisdiction, the exercise of any statutory right or remedy conferred by the Constitution and the laws of Maryland with respect to any misrepresentation made or any violation of the obligations, terms and covenants undertaken by the above business with respect to (1) this affidavit, (2) the contract, and (3) other affidavits comprising part of the contract.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

\_\_\_\_\_ By: \_\_\_\_\_

Date

Signature

Print Name: \_\_\_\_\_

Authorized Representative and Affiant



**ATTACHMENT 13 CRIMINAL BACKGROUND CHECK AFFIDAVIT**

**AUTHORIZED REPRESENTATIVE**

I HEREBY AFFIRM THAT:

I am the \_\_\_\_\_ (Title) \_\_\_\_\_ and the duly authorized representative of \_\_\_\_\_ (Contractor) and that I possess the legal authority to make this Affidavit on behalf of myself and the business for which I am acting.

A. I hereby affirm that \_\_\_\_\_ (Contractor) \_\_\_\_\_ has complied with Section 2.6, Security Requirements of the Department of Information Technology's Data Telecommunications Services Contract Number F50B4400028 referred hereto as Exhibit A.

B. I hereby affirm that the \_\_\_\_\_ (Contractor) \_\_\_\_\_ has provided \_\_\_\_\_ (DoIT) \_\_\_\_\_ with a summary of the security clearance results for all of the candidates that will be working at high security facilities under this Contract and that all of these candidates have successfully passed all of the background checks required under Section 2.6.3 the Contract. Contractor hereby agrees to provide security clearance results for any additional candidates at least seven (7) days prior to the date the candidate commences work on the premises of a State high-security facility.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Typed Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**ATTACHMENT 14 LIST OF INTERSTATE CIRCUITS**

| <b>Circuit ID</b> | <b>Carrier</b> | <b>Location A</b>                                       | <b>Location Z</b>   |
|-------------------|----------------|---|---|
| DHEC.378356.ATI   | AT&T           | 1201 Reisterstown Road,<br>Pikesville, MD 21208         | 296 Medevac Lane (Route 1, Box 100),<br>Wiley Ford, WV 26767                        |
| DHEC.496290.ATI   | AT&T           | 18320 Col. Henry K. Douglas Dr.,<br>Hagerstown MD 21740 | 120 Potomac Street, Harper's Ferry,<br>WV 25425                                     |
| DHEC.497031.ATI   | AT&T           | 18320 Col. Henry K. Douglas Dr.,<br>Hagerstown MD 21740 | 229 East Martin Street, Martinsburg,<br>WV 25401                                    |
| DHEC.496233.ATI   | AT&T           | 18320 Col. Henry K. Douglas Dr.,<br>Hagerstown MD 21740 | 5057 Flowing Springs Road,<br>Shenandoah Junction (formerly<br>Duffields), WV 25414 |
| BCNZ6117          | Level 3        | 1755 Old Meadow RD, McLean,<br>VA                       | 4510 13th Avenue S., Fargo, ND 58121  |



State of Maryland  
Department of Information Technology

LARRY HOGAN  
Governor  
BOYD K. RUTHERFORD  
Lieutenant Governor

MICHAEL G. LEAHY  
Acting Secretary  
LANCE SCHINE  
Deputy Secretary

**REQUEST FOR PROPOSALS (RFP)  
DATA TELECOMMUNICATIONS SERVICES  
F50B4400028-EXPANSION WINDOW #1  
Amendment #1**

April 5, 2018

Prospective Offerors:

This Amendment #1 is being issued to amend and clarify certain information contained in the above referenced RFP. All information contained herein is binding on all Master Contractor responding to this RFP. For the following changes/additions, any new language has been doubled underlined and marked in bold (i.e. **new**) and any deleted language has been marked with a strikethrough (i.e., ~~deleted~~).

Please see corrections to the RFP KEY INFORMATION SUMMARY SHEET as follows:

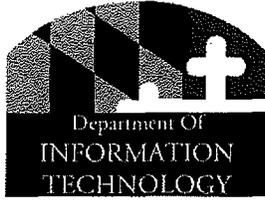
|                                   |   |
|-----------------------------------|---|
| <b>Proposal Due Date and Time</b> | <b>April 24, 2018 at 2:00 PM Local Time</b> |
|-----------------------------------|---|

|                                   |  |
|-----------------------------------|--|
| <b>Proposal Due Date and Time</b> | <b>May 1, 2018 at 2:00 PM Local Time</b> |
|-----------------------------------|--|

Issued by:

Dapheny McCray

Procurement Officer



State of Maryland  
Department of Information Technology

LARRY HOGAN  
Governor  
BOYD K. RUTHERFORD  
Lieutenant Governor

MICHAEL G. LEAHY  
Acting Secretary  
LANCE SCHINE  
Deputy Secretary

**REQUEST FOR PROPOSALS (RFP)  
DATA TELECOMMUNICATIONS SERVICES  
F50B4400028-EXPANSION WINDOW #1  
Amendment #2**

April 23, 2018

Prospective Offerors:

This Amendment #2 is being issued to amend and clarify certain information contained in the above referenced RFP. All information contained herein is binding on all Master Contractor responding to this RFP. For the following changes/additions, any new language has been doubled underlined and marked in bold (i.e. **new**) and any deleted language has been marked with a ~~strikeout~~ (i.e., ~~deleted~~).

Please see corrections to the RFP KEY INFORMATION SUMMARY SHEET as follows:

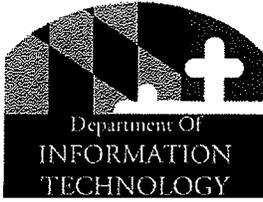
|                             |                                      |
|-----------------------------|--------------------------------------|
| Questions Due Date and Time | April 16, 2018 at 5:00 PM Local Time |
|-----------------------------|--------------------------------------|

|                             |                                      |
|-----------------------------|--------------------------------------|
| Questions Due Date and Time | April 25, 2018 at 2:00 PM Local Time |
|-----------------------------|--------------------------------------|

Issued by:

Dapheny McCray

Procurement Officer



State of Maryland  
Department of Information Technology

LARRY HOGAN  
Governor  
BOYD K. RUTHERFORD  
Lieutenant Governor

MICHAEL G. LEAHY  
Acting Secretary  
LANCE SCHINE  
Deputy Secretary

**REQUEST FOR PROPOSALS (RFP)  
DATA TELECOMMUNICATIONS SERVICES  
F50B4400028-EXPANSION WINDOW #1  
Amendment #3**

April 23, 2018

Prospective Offerors:

This Amendment #1 is being issued to amend and clarify certain information contained in the above referenced RFP. All information contained herein is binding on all Master Contractor responding to this RFP. For the following changes/additions, any new language has been doubled underlined and marked in bold (i.e. **new**) and any deleted language has been marked with a strikethrough (i.e., ~~deleted~~).

Please see corrections to the RFP KEY INFORMATION SUMMARY SHEET as follows:

|                                       |   |
|---------------------------------------|---|
| <del>Proposal Due Date and Time</del> | <del>April 24, 2018 at 2:00 PM Local Time</del> |
|---------------------------------------|---|

|                                   |   |
|-----------------------------------|---|
| <b>Proposal Due Date and Time</b> | <b>May 15, 2018 at 2:00 PM Local Time</b> |
|-----------------------------------|---|

Issued by:

Dapheny McCray

Procurement Officer

Exhibit B

COMCAST ENTERPRISE GENERAL TERMS AND CONDITIONS

**COMCAST ENTERPRISE SERVICES  
GENERAL TERMS AND CONDITIONS  
("General Terms and Conditions")**

**ARTICLE 1: DEFINITIONS**

For purposes of these General Terms and Conditions, the following terms shall have the meanings specified below.

**Affiliate:** With respect to each party, any entity that controls, is controlled by or is under common control with such, party.

**Agreement:** Collectively, these General Terms and Conditions, the Enterprise Master Services Agreement Cover Page executed by the Customer and accepted by Comcast, any applicable Product Specific Attachment and each binding Sales Order.

**Comcast:** The operating Affiliate of Comcast Cable Communications Management, LLC that provides the Services. References to Comcast in Article 5 and Article 6 shall also include its Affiliates and their respective directors, officers, employees, agents, suppliers, licensors, successors, and assigns, as the case may be.

**Comcast Equipment:** – Any and all facilities, equipment or devices provided by Comcast or its authorized contractors at the Service Location(s) that are used to deliver the Services. Notwithstanding the foregoing, inside telephone wiring within a Service Location, whether or not installed by Comcast, shall not be considered Comcast Equipment.

**Confidential Information:** All information regarding either party's business which has been marked or is otherwise communicated as being "proprietary" or "confidential" or which reasonably should be known by the receiving party to be proprietary or confidential information. Without limiting the foregoing, Confidential Information shall include, even if not marked, the Agreement, all Licensed Software, promotional materials, proposals, quotes, rate information, discount information, subscriber information, network upgrade information and schedules, network operation information (including without limitation information about outages and planned maintenance) and invoices, as well as the parties' communications regarding such items.

**Customer:** The entity named on the Enterprise Services Master Service Agreement Cover Page.

**Customer-Provided Equipment:** Any and all facilities, equipment or devices supplied by a party other than Comcast or its authorized contractors for use in connection with the Services.

**Network:** The Comcast Equipment, facilities, fiber optic or coaxial cable associated with electronics and other equipment used to provide the Services.

**Product Specific Attachment(s) or PSA(s):** The additional terms and conditions applicable to the Services.

**Sales Order:** A request to provide the Services to a Service Location(s) submitted by Customer to Comcast on (a) the then-current Comcast form designated for such purpose or (b) such other form, or in such other manner, as may be agreed upon by the parties.

**Service(s):** Service(s) provided by Comcast pursuant to a Sales Order. All Services provided under the Agreement are for commercial, non-residential use only.

**Service Commencement Date:** With respect to each Service, "Service Commencement Date" shall have the meaning specified in the PSA applicable to such Service, it being understood that a single Sales Order containing multiple Service Locations or Services may have multiple Service Commencement Dates.

**Service Location(s):** The Customer location(s) where Comcast provides the Services.

**Service Term:** As specified in a Sales Order, the duration of time (which shall commence on the Service Commencement Date) for which Services are ordered. If not specified in a Sales Order, the Service Term shall be one (1) year from the Service Commencement Date.

**"Website"** – means the Comcast website where the General Terms and Conditions, PSAs, the Privacy Policy and the Use Policies are posted. The current URL for the Website is <https://business.comcast.com/terms-conditions-ent> (as the same may be updated by Comcast from time-to-time).

**ARTICLE 2. DELIVERY OF SERVICE**

**2.1 Orders.** To request Service at a Service Location(s), Customer shall submit a properly completed Sales Order to Comcast. Such Sales Order shall become binding on the parties upon the earlier of (i) Comcast's notice to Customer that it accepts such Sales Order, (ii) Comcast begins providing the Service described in the Sales Order or (iii) Comcast begins installation or construction for delivery of the Services. Each Sales Order submitted by Customer may be subject to an engineering review which will determine whether and to what extent the Network must be extended, built or upgraded in order to provide the ordered Services. Comcast will provide Customer written notification in the event Service installation at any Service Location will require an additional non-recurring installation fee ("Custom Installation Fee" or "Construction Charges"). Notwithstanding anything to the contrary contained in this Article 2.1, Customer shall have five (5) business days from receipt of such notice to reject the Custom Installation Fee and terminate the affected Service Location(s). For certain Services, the Engineering Review will be conducted prior to Sales Order submission. In such case, Customer shall be deemed to have accepted the designated Custom Installation Fee upon submission of the applicable Sales Order.

**2.2 Access.** In order to deliver Services to Customer, Comcast may require access, right-of-way, conduit, and/or common room space ("Access") within and/or outside each Service Location. Within the Service Location, Customer shall be solely responsible for securing and maintaining such Access as Comcast may require to deliver the Services. In the event that Customer fails to secure or maintain such Access, Comcast shall be excused from its obligations with respect to the Service(s) at such Service Location (including any obligation to issue service credits) until such time as Customer provides Comcast with the necessary Access. If Comcast is unable to secure or maintain Access outside a particular Service Location, which Access is needed to provide Services to such Service Location, Customer may cancel or terminate Service at such Service Location, without further liability beyond the termination date, upon a minimum thirty (30) days' prior written notice to the Comcast.

**2.3 Hazardous Materials.** If the presence of asbestos or other hazardous materials exists or is detected at a Service Location or within the building where the Service Location is located, Comcast may immediately stop providing and/or installing Services until such materials are removed..

#### **2.4 Equipment**

**A. Comcast Equipment.** Comcast may, in its sole discretion, remove or change Comcast Equipment. Customer shall not move, rearrange, disconnect, remove, attempt to repair, or otherwise tamper with any Comcast Equipment or permit others to do so, and shall not use the Comcast Equipment for any purpose other than as authorized by the Agreement. Customer shall (i) provide an adequate environmentally controlled space and such electricity as may be required for installation, operation, and maintenance of the Comcast Equipment and (ii) be responsible for damage to, or loss of, Comcast Equipment caused by its acts or omissions, or by fire, theft or other casualty at the Service Location(s), unless caused by the gross negligence or willful misconduct of Comcast. Comcast shall maintain, at its cost, Comcast Equipment during the term of this Agreement; provided, however, that such maintenance shall be at Customer's cost to the extent it is related to causes other than the ordinary and proper use of the Comcast Equipment. Upon termination or expiration of this Agreement and/or any Sales Order, Customer shall be responsible for the return of all applicable Comcast Equipment.. If any returned Comcast Equipment has been damaged and/or destroyed other than by Comcast or its agents, normal wear and tear excepted, Comcast may, in its sole discretion, invoice

Customer for the manufacturer's list price of such Comcast Equipment or the cost of repair.

**B. Customer-Provided Equipment.** Customer shall have sole responsibility for providing maintenance, repair, operation and replacement of all Customer-Provided Equipment, inside telephone wiring and other Customer equipment and facilities on the Customer's side of the demarcation point (i.e., the point of interconnection between the Network and Customer-Provided Equipment located at a Service Location). Neither Comcast nor its employees, Affiliates, agents or contractors shall (i) have any obligation to install, operate, or maintain Customer-Provided Equipment or (ii) be liable for any damage, loss, or destruction to Customer-Provided Equipment, unless caused by the gross negligence or willful misconduct of Comcast. Customer-Provided Equipment shall at all times be compatible with the Network. Customer shall be responsible for the payment of service charges for visits by Comcast's employees or agents to a Service Location when the service difficulty or trouble report results from Customer-Provided Equipment.

#### **2.5 Network, Intellectual Property and IP Addresses.**

**A.** The Network is and shall remain the property of Comcast regardless of whether installed within, upon, overhead, above, or underground at or near the Service Location and shall not be considered a fixture or an addition to the land or the Service Location(s) located thereon. Customer agrees that it shall take no action that directly or indirectly impairs Comcast's title to the Network, or any portion thereof, or exposes Comcast to any claim, lien, encumbrance, or legal process, except as otherwise agreed in writing by the parties. Nothing in this Agreement shall preclude Comcast from using the Network for services provided to other Comcast customers. For a period of twelve (12) months following Comcast's discontinuance of Service to the Service Location(s), Comcast retains the right to remove the Network. To the extent Comcast removes such portion of the Network it shall be responsible for returning the Service Location(s) to its prior condition, reasonable wear and tear excepted.

**B.** Customer acknowledges that use of the Services does not give it any ownership or other rights in any telephone number or Internet/online addresses provided in connection with such Services, including, but not limited to, Internet Protocol addresses, e-mail addresses and web addresses.

**C.** Title and intellectual property rights to (i) the Services and (ii) any computer software or code provided by Comcast to use the Services, including, but not limited to, associated documentation, and all updates thereto ("Licensed Software") are, in each case, owned by Comcast, its agents, suppliers or affiliates or their licensors or otherwise by the owners of such material. The copying, redistribution, bundling or publication of the Services, in whole or in part, without the express prior

written consent of Comcast or other owner of such material, is prohibited.

D. The Agreement provides no right to use any party's or its Affiliates' trademarks, service marks, or trade names, or to otherwise refer to the other party in any marketing, promotional, or advertising materials or activities.

**2.6 License Grant.** If Customer requires the use of Licensed Software from Comcast in order to use the Services, ~~Customer shall have a nonexclusive, nontransferable,~~ and limited license to use such Licensed Software in object code only and solely to the extent necessary to use the applicable Service during the corresponding Service Term. Customer may not claim title to, or an ownership interest in, any Licensed Software (or any derivations or improvements thereto), and Customer shall execute any documentation reasonably required by Comcast, including, without limitation, end-user license agreements for the Licensed Software. Customer shall not: (i) copy the Licensed Software (or any upgrades thereto or related written materials) except for emergency back-up purposes or as permitted by the express written consent of Comcast; (ii) reverse engineer, decompile, or disassemble the Licensed Software; (iii) sell, lease, license, or sublicense the Licensed Software; or (iv) create, write, or develop any derivative software or any other software program based on the Licensed Software. Customer acknowledges that the use of Service may periodically require updates and/or changes to the Licensed Software resident in the Comcast Equipment or Customer Provided-Equipment. Customer hereby consents to, and shall provide free access for, such updates deemed reasonably necessary by Comcast.

### **ARTICLE 3. BILLING AND PAYMENT**

#### **3.1 Charges; Changes to MRC; Taxes.**

A. Customer agrees to pay all charges associated with the Services, including, but not limited to, (i) any fees or payment obligations in connection with the Services imposed by governmental or quasi-governmental bodies in connection with the sale, installation, use, or provision of the Services (e.g., applicable franchise fees, right of way fees and Universal Service Fund charges) regardless of whether Comcast or its Affiliates pay the fees directly or are required or permitted by law to collect them from Customer and (ii) charges incurred as the result of fraudulent or unauthorized use of the Services. Any failure on the part of Customer to be ready to receive Service, or any refusal on the part of Customer to receive Service, shall not relieve Customer of its obligation to pay charges for any Service that is otherwise available for use. For the avoidance of doubt, Comcast shall not be responsible for any purchases made by Customer or its end users while using the Services.

B. Except to the extent Customer provides a valid tax exemption certificate prior to the delivery of Service, Customer shall be responsible for the payment of any and all applicable local, state, and federal taxes or fees (however designated).

#### **3.2 Reserved**

#### **3.3 Reserved.**

### **ARTICLE 4. RESERVED.**

#### **4.1 Effect of Expiration/Termination of a Sales Order.**

Upon the expiration or termination of a Sales Order for any reason (i) Comcast shall disconnect the applicable Service, (ii) Comcast shall delete all applicable data, files, electronic messages, or other information stored on Comcast's servers or systems. Termination by either Party of a Sales Order does not waive any other rights or remedies that it may have under this Agreement. The non-defaulting Party shall be entitled to all available legal and equitable remedies for such breach.

### **ARTICLE 5. LIMITATION OF LIABILITY; DISCLAIMER OF WARRANTIES**

#### **5.1 Limitation of Liability.**

A. THE AGGREGATE LIABILITY OF COMCAST FOR ANY AND ALL LOSSES, DAMAGES AND CAUSES ARISING OUT OF THE AGREEMENT, INCLUDING, BUT NOT LIMITED TO, THE PERFORMANCE OF SERVICE, AND NOT OTHERWISE LIMITED HEREUNDER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, SHALL NOT EXCEED DIRECT DAMAGES EQUAL TO THE SUM TOTAL OF PAYMENTS MADE BY CUSTOMER TO COMCAST DURING THE THREE (3) MONTHS IMMEDIATELY PRECEDING THE EVENT FOR WHICH DAMAGES ARE CLAIMED. THIS LIMITATION SHALL NOT APPLY TO COMCAST'S INDEMNIFICATION OBLIGATIONS AND CLAIMS FOR DAMAGE TO PROPERTY AND/OR PERSONAL INJURIES (INCLUDING DEATH) ARISING OUT OF THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF COMCAST WHILE ON THE CUSTOMER SERVICE LOCATION.

B. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THE AGREEMENT, IN NO EVENT SHALL THE AGGREGATE LIABILITY OF COMCAST UNDER THIS AGREEMENT FOR ALL INDEMNIFICATION OF IP CLAIMS EXCEED THE GREATER OF (I) ONE (1) MILLION DOLLARS (\$1,000,000) AND (II) THE AGGREGATE AMOUNT OF FEES RECEIVED BY COMCAST FROM CUSTOMER DURING THE TWELVE (12) MONTH PERIOD IMMEDIATELY PRECEDING THE DATE ON WHICH THE IP CLAIM FIRST AROSE.

C. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THE AGREEMENT, IN NO EVENT SHALL COMCAST BE LIABLE FOR ANY LOSS, DAMAGE OR CLAIM ARISING OUT OF OR RELATED TO: (1) STORED, TRANSMITTED, OR RECORDED DATA, FILES, OR SOFTWARE; (2) ANY ACT OR OMISSION OF CUSTOMER, ITS USERS OR THIRD PARTIES; (3) INTEROPERABILITY, INTERACTION OR INTERCONNECTION OF THE SERVICES WITH APPLICATIONS, EQUIPMENT, SERVICES OR NETWORKS PROVIDED BY CUSTOMER OR THIRD PARTIES; OR (4) LOSS OR DESTRUCTION OF ANY CUSTOMER HARDWARE, SOFTWARE, FILES OR DATA RESULTING FROM ANY VIRUS OR OTHER HARMFUL FEATURE OR FROM ANY ATTEMPT TO REMOVE IT. CUSTOMER IS SOLELY RESPONSIBLE FOR BACKING UP ITS DATA, FILES, AND SOFTWARE PRIOR TO THE INSTALLATION OF SERVICE AND AT REGULAR INTERVALS THEREAFTER.

D. NOTWITHSTANDING ANYTHING TO CONTRARY CONTAINED IN THIS AGREEMENT, NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY INCIDENTAL, INDIRECT, SPECIAL, COVER, PUNITIVE OR CONSEQUENTIAL DAMAGES, WHETHER OR NOT FORESEEABLE, OF ANY KIND INCLUDING BUT NOT LIMITED TO ANY LOSS REVENUE, LOSS OF USE, LOSS OF BUSINESS, OR LOSS OF PROFIT WHETHER SUCH ALLEGED LIABILITY ARISES IN CONTRACT OR TORT; PROVIDED, THAT, THE FOREGOING LIMITATION SHALL NOT LIMIT CUSTOMER'S LIABILITY FOR AMOUNTS OWED FOR THE SERVICES, FOR ANY EQUIPMENT OR SOFTWARE PROVIDED BY COMCAST.

**5.2 Disclaimer of Warranties.** Services shall be provided pursuant to the terms and conditions in the applicable PSA and Service Level Agreement, and are in lieu of all other warranties, express, implied or statutory, including, but not limited to, the implied warranties of merchantability, fitness for a particular purpose, title, and non-infringement. **TO THE MAXIMUM EXTENT ALLOWED BY LAW, COMCAST EXPRESSLY DISCLAIMS ALL SUCH EXPRESS, IMPLIED AND STATUTORY WARRANTIES.** Without limiting the generality of the foregoing, and except as otherwise identified in a PSA or Service Level Agreement, Comcast does not warrant that the Services, Comcast Equipment, or Licensed Software will be uninterrupted, error-free, or free of latency or delay, or that the Services, Comcast Equipment, or Licensed Software will meet customer's requirements, or that the Services, Comcast Equipment, or Licensed Software will prevent unauthorized access by third parties. Customer acknowledges and agrees that the Services are not fail-safe and are not designed or intended for use in situations requiring fail-safe performance or in which an error or interruption in the Services could lead to severe injury to business, persons,

property or environment.

**5.3 Exclusive Remedies.** Customer's sole and exclusive remedies are as expressly set forth in the Agreement. In those states where Customer's remedies cannot be so limited, the

liability of Comcast is limited to the maximum extent permitted by law.

## **ARTICLE 6. RESERVED**

## **ARTICLE 7. CONFIDENTIAL INFORMATION AND PUBLICITY**

7.1 **Reserved.**

7.2 **Publicity.** Neither party shall issue any publication or press release relating to, or otherwise disclose the existence of, the terms and conditions of any contractual relationship between Comcast and Customer without the prior written consent of the other party.

7.3 **Remedies.** Notwithstanding any other Article of this Agreement, the non-breaching party shall be entitled to seek equitable relief to protect its interests pursuant to this Article 7, including, but not limited to, injunctive relief.

## **ARTICLE 8. PROHIBITED USES; USE AND PRIVACY POLICIES**

8.1 **Prohibited Uses; Comcast Use Policies.** Customer is prohibited from using, or permitting the use of, any Service (i) for any purpose in violation of any law, rule, regulation, or policy of any government authority; (ii) in violation of any Use Policy (as defined below); (iii) for any use as to which Customer has not obtained all required government approvals, authorizations, licenses, consents, and permits; or (iv) to interfere unreasonably with the use of Comcast service by others or the operation of the Network. Customer is responsible for the compliance of its users with the provisions of the Agreement. Customer may not sell, resell, sublicense, assign, license, sublicense, share, provide, or otherwise utilize in conjunction with a third party (including, without limitation, in any joint venture or as part of any outsourcing activity) the Services or any component thereof. Customer acknowledges and agrees that Customer's and its users' use of Services shall be subject to Comcast's acceptable use policies ("AUPs") and security policies (together with the AUPs, the "Use Policies") that may limit Customer's and its users' use of the Services. The Use Policies are posted on the Website, and are incorporated into this Agreement by reference. Comcast reserves the right to act immediately and without notice to (i) suspend the Services and/or to remove from the Services any information transmitted by or to Customer or users, if Comcast determines that such use or information is in violation of this Article 8.1 or the Use Policies and (ii) suspend the Services in the event of fraudulent use of Customer's Services. Customer acknowledges and agrees that Comcast may, but is not obligated to, detect or report unauthorized or fraudulent use of the Services to Customer.

8.2 **Privacy Policy.** Comcast's commercial privacy policy (the "Privacy Policy") applies to Comcast's handling of Customer confidential information. The Privacy Policy is

available on the Website. Notwithstanding the foregoing or anything to the Contrary contained in the Agreement or the Privacy Policy, Comcast is not responsible for any information provided by Customer to third parties and Customer assumes all privacy and other risks associated with providing personally identifiable information to third parties via the Services.

## **ARTICLE 9. MISCELLANEOUS TERMS**

9.1 **Force Majeure.** Neither party nor its Affiliates shall be liable to the other party for any delay, failure in performance, loss, or damage to the extent caused by force majeure conditions such as acts of God, fire, explosion, power blackout, cable cuts, acts of regulatory or governmental agencies, unforeseeable third party actions, or other causes beyond the party's reasonable control, except that Customer's obligation to pay for Services provided under the Agreement shall not be excused. Changes in economic, business or competitive condition shall not be considered force majeure events.

9.2 **Assignment or Transfer.** Customer shall not assign any right, obligation or duty, in whole or in part, nor of any other interest hereunder, without the prior written consent of Comcast, which shall not be unreasonably withheld. All obligations and duties of either party hereunder shall be binding on all successors in interest and permitted assigns of such party.

9.3 **Notices.** Except as otherwise identified herein, any notice sent pursuant to the Agreement shall be deemed given and effective when sent by facsimile (confirmed by first-class mail), or when delivered by overnight express or other express delivery service, in each case, to the following addresses (or to such other addresses as a party may designate by written notice to the other party): (i) with respect to Customer, to the address set forth on any Sales Order; or (ii) with respect to Comcast, to: Vice President of Sales Operations (Comcast Business), One Comcast Center, 1701 JFK Blvd., Philadelphia, PA 19103, with a copy to Cable Law Department, One Comcast Center, 50<sup>th</sup> Floor, 1701 JFK Blvd., Philadelphia, PA 19103. Alternatively, Customer may send termination notice to Comcast through the Comcast disconnection portal found at the following URL: <https://business.comcast.com/landingpage/disconnect> (as the same may be updated by Comcast from time-to-time).

9.4 **Amendments; Changes to the Agreement.** The Agreement may not be amended except by a written agreement executed by the parties; provided, that, notwithstanding the foregoing, Comcast may change or modify the Agreement (including these General Terms and Conditions and the PSAs), and any related policies (including the Use Policies and Privacy Policy) from time to time ("Revisions") by posting such Revisions to the Website. The Revisions are effective upon posting to the Website. Customer will receive notice of any Revisions in the next applicable monthly invoice. Customer shall have thirty (30) calendar days from the invoice notice of such Revisions to provide Comcast with written notice that the Revisions adversely affect Customer's use of the Service(s). If, after such notice, Comcast is able to verify such adverse effect

but is unable to reasonably mitigate the Revision's impact on such Services, then Customer may terminate the impacted Service(s) without further obligation to Comcast beyond the termination date, including Termination Charges, if any. This shall be Customer's sole and exclusive remedy for any Revisions. Terms or conditions contained in any Sales Order, or restrictive endorsements or other statements on any form of payment, shall be void and of no force or effect.

**9.5 Reserved.**

**9.6 Entire Understanding; Construction; Survival; Headings; No Waiver.** The Agreement supersedes all prior agreement between the parties with respect to its subject matter and constitutes a complete and exclusive statement of the terms of the agreement between the parties with respect to the subject matter hereof. In the event that any portion of the Agreement is held to be invalid or unenforceable, the parties shall replace the invalid or unenforceable portion with another provision that, as nearly as possible, reflects the original intention of the parties, and the remainder of the Agreement shall remain in full force and effect. The rights and obligations of either party that by their nature would continue beyond the termination or expiration of the Agreement shall survive termination or expiration of the Agreement. The article headings used herein are for reference only and shall not limit or control any term or provision of this Agreement or the interpretation or construction thereof. No failure by either party to enforce any right(s) hereunder shall constitute a waiver of such right(s). The Agreement may be executed in counterpart copies. Each party represents and warrants that the persons who executes the Agreement on its behalf are duly authorized to do so.

**9.7 Choice of Law; Compliance with Laws.** The domestic law of the state in which the Service is provided shall govern the construction, interpretation, and performance of this Agreement, except to the extent superseded by federal law. Each of the parties agrees to comply with all applicable local, state and federal laws and regulations and ordinances in the performance of its respective obligations under this Agreement.

**9.8 No Third Party Beneficiaries; Independent Contractors.** This Agreement does not expressly or implicitly provide any third party (including users) with any remedy, claim, liability, reimbursement, cause of action, or other right or privilege. The parties to this Agreement are independent contractors. Neither party is an agent, representative, or partner of the other party. Neither party shall have any right, power, or authority to enter into any agreement for, or on behalf of, or incur any obligation or liability of, or to otherwise bind, the other party. This Agreement shall not be interpreted or construed to create an association, agency, joint venture, or partnership between the parties or to impose any liability attributable to such a relationship upon either party.

Exhibit C

COMCAST ENTERPRISE SERVICES PRODUCT SPECIFIC ATTACHMENT – CABLE  
MODEM INTERNET SERVICES

COMCAST ENTERPRISE SERVICES PRODUCT-SPECIFIC ATTACHMENT CABLE MODEM  
INTERNET SERVICES

ATTACHMENT IDENTIFIER: Cable Modem Internet, Version 1.0

The following additional terms and conditions are applicable to Sales Orders for Comcast's Cable Modem Internet Service offered under the Enterprise Master Service Agreement ("Agreement"):

DEFINITIONS

Capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the General Terms and Conditions.

"Estimated Availability Date" means the target date for delivery of Service.

"Interconnection Facilities" means transmission capacity provided by Comcast, Customer or a third-party supplier to extend the Comcast Equipment from a Comcast terminal to any other location (e.g., a local loop provided by a local exchange company or other communications company).

"Off-Net" means geographical locations that are outside of Comcast's service area and/or geographical locations that are within Comcast's service area generally, but are not readily accessible by Comcast Network facilities. All Off-Net Services are provided by third-party service providers.

"On-Net" means geographical locations where Comcast currently provides Services through its Comcast Network. On-Net Services may be provisioned over a fiber optic network, or via a hybrid fiber coax network ("HFC Network"), as available through Comcast.

"Service" means Cable Modem Internet Service offered under the Agreement.

ARTICLE 1. SERVICES

This attachment shall apply to Cable Modem Internet Service offered under the Agreement.

ARTICLE 2. PROVIDER

On-Net Service shall be provided by the operating company subsidiary of Comcast Corporation that owns and/or operates the cable television system in the applicable service area.

On-Net Service provided over the HFC Network and Off-Net Services are available in a limited number of markets. For information on service availability, contact your Program Manager

All Off-Net Services are provided by third-party service providers, and managed by Comcast

ARTICLE 3. RESERVED

ARTICLE 4. PROVISIONING INTERVAL

Following its acceptance of a Sales Order, Comcast shall notify Customer of the Estimated Availability Date applicable to that Sales Order. Comcast shall use commercially reasonable efforts to provision the Service on or before the Estimated Availability Date; provided, however, that Comcast's failure to provision by said date shall not constitute a breach of the Agreement.

ARTICLE 5. SERVICE COMMENCEMENT DATE

The Service Commencement Date for On-Net Services shall be the date Comcast completes installation and connection of the necessary facilities and equipment to provide the Service at a Service Location. Comcast shall inform Customer when Service is available for all Off-Net locations ("Service Commencement Date"). Charges for Service shall begin to accrue as of the Service Commencement Date.

ARTICLE 6. RESERVED

ARTICLE 7. PROVISION OF SERVICE/USE

Subject to the terms and conditions herein, Internet Services are intended for commercial use only. Customer is prohibited from reselling the Services.

ARTICLE 8. DOMAIN NAME REGISTRATION.

If Customer submits a Sales Order(s) for domain name registration services, the following terms shall also apply:

8.1 Registration. At the request of Customer, Comcast will use commercially reasonable efforts to facilitate the registration of the Customer internet domain name ("Customer Domain Name") with a domain name registration service of Comcast's choosing, but only to the extent that Customer provides Comcast with all necessary information relevant to such registration. The domain name registration service will invoice Customer directly for all applicable registration fees, maintenance fees, and other applicable fees related thereto. Customer hereby acknowledges that Customer is entirely responsible for the payment of any and all such fees. Comcast does not represent that the Customer Domain Name will be available on an initial or ongoing basis. Further, Customer acknowledges that Customer, not Comcast, has ownership, control, and use of the Customer Domain Name. Further, Customer hereby agrees now and forever to release and to hold harmless Comcast, its employees, affiliates, agents, and contractors, from any and all losses, damages, rights, claims, and actions with respect to, or in any way arising from, the domain name registration service's removal of allocation or support for the Customer Domain Name.

8.2 Sub-Domain Name. Should Customer be unable to register a unique domain name, Comcast may grant upon Customer request and only for the term of the Sales Order providing for such service, the limited, personal, and non-transferable right to specify and append a sub-domain name to Comcast's prescribed domain name, for the sole purpose of uniquely identifying Customer's e-mail address. Comcast does not represent that Customer's selected sub-domain name will be available. Customer receives no right to Comcast's domain name other than as specifically stated in this Article 8. Upon the termination of the applicable Sales Order, Customer shall surrender all rights, privileges and interest in and to the sub-domain name and Comcast's domain name. As necessary for the interconnection of the Service with services provided by others, Comcast may request (as applicable), and Customer will provide to Comcast, circuit facility assignment information, firm order commitment information, and design layout records necessary to enable Comcast to make the necessary cross-connection between the Service and Customer's other service provider(s). Comcast may charge Customer nonrecurring and monthly recurring cross-connect charges to make such connections.

ARTICLE 9: SERVICE CREDITS

9.1 Credit Allowances. Comcast will allow a pro-rata credit against future payment of the net monthly recurring charge (exclusive of nonrecurring charges, other one-time charges, per call charges, measured charges, regulatory fees and surcharges, taxes, and other governmental and quasi-governmental fees) for a Service Interruption, except as specified below or as may otherwise be legally required ("Credit"). "Service Interruption" shall mean a break in transmission that renders the Service unusable for transmission and reception. For the purposes of calculating a Credit allowance, the Service Interruption period begins when the Customer reports an interruption in the portion of the Service to Comcast, a trouble ticket is opened, and the Service is released to Comcast for testing and repair. The Service Interruption ends when the affected portion of the Service has been restored and Comcast has closed the trouble ticket. Service Interruption time does not include interruptions of less than thirty (30) minutes' duration. Credits will be as follows:

|   |  |
|---|--|
| <u>Length of Service Interruption</u><br>including 24 hours | <u>Amount of Credit</u> At least 4 hours and up to and<br>1 full day |
|---|--|

The total number of credit allowances per month shall not exceed the total monthly recurring charge for the affected Service. Credit allowances will not be made for less than

\$1.00, unless required under applicable law. To qualify, Customer must request the Credit from Comcast within 30 days of the Service Interruption.

9.2 Exceptions to Credit Allowances. Except as otherwise provided in the General Terms and Conditions, a Service Interruption shall not qualify for the Credits set forth herein if such Service Interruption is related to, associated with, or caused by: scheduled maintenance events;

Customer actions or inactions; Customer-provided power or equipment; any third party not contracted through Comcast, including, without limitation, Customer's users, third-party network providers; any power, equipment or services provided by third parties; or an event of force majeure as defined in this Agreement, unless otherwise provided under applicable law. The remedies set forth in this Article 11 shall be Customer's sole and exclusive remedy for any Service Interruption in the Services, outage, unavailability, delay or other degradation in the Services or any Comcast failure to meet the objectives of the Services.

## 10. STATE-SPECIFIC PROVISIONS APPLICABLE TO INTERNET SERVICE

### 10.1 Service Interruption.

(1) Montgomery County, MD Customers. Under its franchise with Montgomery County, MD, Comcast has the following rebate policy: In the event of an Internet Service Interruption (loss of cable modem service) Comcast shall repair the Service Interruption as soon as possible. This obligation is satisfied if Comcast offers Customer the next available repair appointment within the 24-hour period following the Service Interruption, or at Customer's request, to a mutually convenient later time for the repair call, and successfully repairs the Service Interruption during the agreed upon appointment. If the Service Interruption is not repaired at the time of the scheduled appointment, Customer will receive a prorated credit for each 24-hour period, or segment thereof, that the Service Interruption continues beyond the scheduled repair call. Customer may contact Comcast at (301) 424-4400.

## ARTICLE 11: ADDITIONAL TERMS APPLICABLE TO PRIVATE WI-FI AND PUBLIC WI-FI (INCLUDING WI-FI HOTSPOT SERVICES) SERVICES

If Customer submits a Sales Order(s) for Private Wi-Fi ("Private Wi-Fi Services") and Public Wi-Fi (including Hot Spot Service, "Public Wi-Fi Services") services (collectively "Wi-Fi Services") the following terms shall also apply:

11.1 Limitation. Subject to service availability, Customer may order Wi-Fi Services to provide Internet connectivity to certain areas of the Service Location as further described below. Wi-Fi Services are not intended for use within residential dwellings or for multi-tenant use (i.e. common areas within a mall or office building). In order to order and retain Wi-Fi Service with Comcast, Customer must have Internet Service at the applicable Service Location. Comcast shall have no liability for loss of Wi-Fi Services which results from Customer's failing to maintain Internet Service at the Service Location.

(a) Private Wi-Fi Services are offered together with Public Wi-Fi Services, and may not be ordered separately.

(b) Public Wi-Fi Services may be order with or without Private Wi-Fi Services.

11.2 Term and Termination. Wi-Fi Services are offered on a month to month basis. Customer shall have the right to terminate Wi-Fi Services, at any time, for any reason, upon thirty (30) days prior written notice to Comcast, subject to payment of all outstanding amounts due for the Wi-Fi Services, if any, and the return of any and all Comcast Equipment. Termination of Wi-Fi Services is not subject to Termination Charges. Wi-Fi Services will terminate simultaneously with Customer's Internet Services.

11.3 Supplemental Terms. Comcast agrees to provide Wi-Fi Services pursuant to the General Terms and Conditions and the supplemental Wi-Fi Terms and Conditions located at <http://business.comcast.com/wifi/hotspot-terms> ("Wi-Fi Terms and Conditions"). Comcast may at its sole option change or modify the Wi-Fi Terms and Conditions, and any related policies from time to time ("Revisions") by posting such Revisions to the Comcast website at the above URL. The Revisions are effective upon posting.

Exhibit C

COMCAST ENTERPRISE SERVICES PRODUCT SPECIFIC ATTACHMENT – CABLE  
MODEM INTERNET SERVICES

COMCAST ENTERPRISE SERVICES  
PRODUCT-SPECIFIC ATTACHMENT  
CABLE MODEM INTERNET SERVICES

ATTACHMENT IDENTIFIER: Cable Modem Internet, Version 1.0

The following additional terms and conditions are applicable to Sales Orders for Comcast's Cable Modem Internet Service offered under the Enterprise Master Service Agreement ("Agreement"):

## DEFINITIONS

Capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the General Terms and Conditions.

"Estimated Availability Date" means the target date for delivery of Service.

"Interconnection Facilities" means transmission capacity provided by Comcast, Customer or a third-party supplier to extend the Comcast Equipment from a Comcast terminal to any other location (e.g., a local loop provided by a local exchange company or other communications company).

"Off-Net" means geographical locations that are outside of Comcast's service area and/or geographical locations that are within Comcast's service area generally, but are not readily accessible by Comcast Network facilities. All Off-Net Services are provided by third-party service providers.

"On-Net" means geographical locations where Comcast currently provides Services through its Comcast Network. On-Net Services may be provisioned over a fiber optic network, or via a hybrid fiber coax network ("HFC Network"), as available through Comcast.

~~"Service" means Cable Modem Internet Service offered under the Agreement.~~

## ARTICLE 1. SERVICES

This attachment shall apply to Cable Modem Internet Service offered under the Agreement.

## ARTICLE 2. PROVIDER

On-Net Service shall be provided by the operating company subsidiary of Comcast Corporation that owns and/or operates the cable television system in the applicable service area.

On-Net Service provided over the HFC Network and Off-Net Services are available in a limited number of markets. For information on service availability, contact your Program Manager

All Off-Net Services are provided by third-party service providers, and managed by Comcast

## ARTICLE 3. RESERVED

## ARTICLE 4. PROVISIONING INTERVAL

Following its acceptance of a Sales Order, Comcast shall notify Customer of the Estimated Availability Date applicable to that Sales Order. Comcast shall use commercially reasonable efforts to provision the Service on or before the Estimated Availability Date; provided, however, that Comcast's failure to provision by said date shall not constitute a breach of the Agreement.

## ARTICLE 5. SERVICE COMMENCEMENT DATE

The Service Commencement Date for On-Net Services shall be the date Comcast completes installation and connection of the necessary facilities and equipment to provide the Service at a Service Location. Comcast shall inform Customer when Service is available for all Off-Net locations ("Service Commencement Date"). Charges for Service shall begin to accrue as of the Service Commencement Date.

## ARTICLE 6. RESERVED

## ARTICLE 7. PROVISION OF SERVICE/USE

Subject to the terms and conditions herein, Internet Services are intended for commercial use only. Customer is prohibited from reselling the Services.

## ARTICLE 8. DOMAIN NAME REGISTRATION.

If Customer submits a Sales Order(s) for domain name registration services, the following terms shall also apply:

8.1 Registration. At the request of Customer, Comcast will use commercially reasonable efforts to facilitate the registration of the Customer internet domain name ("Customer Domain Name") with a domain name registration service of Comcast's choosing, but only to the extent that Customer provides Comcast with all necessary information relevant to such registration. The domain name registration service will invoice Customer directly for all applicable registration fees, maintenance fees, and other applicable fees related thereto. Customer hereby acknowledges that Customer is entirely responsible for the payment of any and all such fees. Comcast does not represent that the Customer Domain Name will be available on an initial or ongoing basis. Further, Customer acknowledges that Customer, not Comcast, has ownership, control, and use of the Customer Domain Name. Further, Customer hereby agrees now and forever to release and to hold harmless Comcast, its employees, affiliates, agents, and contractors, from any and all losses, damages, rights, claims, and actions with respect to, or in any way arising from, the domain name registration service's removal of allocation or support for the Customer Domain Name

8.2 Sub-Domain Name. Should Customer be unable to register a unique domain name, Comcast may grant upon Customer request and only for the term of the Sales Order providing for such service, the limited, personal, and non-

transferable right to specify and append a sub-domain name to Comcast's prescribed domain name, for the sole purpose of uniquely identifying Customer's e-mail address. Comcast does not represent that Customer's selected sub-domain name will be available. Customer receives no right to Comcast's domain name other than as specifically stated in this Article 8. Upon the termination of the applicable Sales Order, Customer shall surrender all rights, privileges and interest in and to the sub-domain name and Comcast's domain name. As necessary for the interconnection of the Service with services provided by others, Comcast may request (as applicable), and Customer will provide to Comcast, circuit facility assignment information, firm order commitment information, and design layout records necessary to enable Comcast to make the necessary cross-connection between the Service and Customer's other service provider(s). Comcast may charge Customer nonrecurring and monthly recurring cross-connect charges to make such connections.

**ARTICLE 9: SERVICE CREDITS**

9.1 Credit Allowances. Comcast will allow a pro-rata credit against future payment of the net monthly recurring charge (exclusive of nonrecurring charges, other one-time charges, per call charges, measured charges, regulatory fees and surcharges, taxes, and other governmental and quasi-governmental fees) for a Service Interruption, except as specified below or as may otherwise be legally required ("Credit"). "Service Interruption" shall mean a break in transmission that renders the Service unusable for transmission and reception. For the purposes of calculating a Credit allowance, the Service Interruption period begins when the Customer reports an interruption in the portion of the Service to Comcast, a trouble ticket is opened, and the Service is released to Comcast for testing and repair. The Service Interruption ends when the affected portion of the Service has been restored and Comcast has closed the trouble ticket. Service Interruption time does not include interruptions of less than thirty (30) minutes' duration. Credits will be as follows:

| <u>Length of Service Interruption</u>             | <u>Amount of Credit</u> |
|---|-------------------------|
| At least 4 hours and up to and including 24 hours | 1 full day              |

The total number of credit allowances per month shall not exceed the total monthly recurring charge for the affected Service. Credit allowances will not be made for less than \$1.00, unless required under applicable law. To qualify, Customer must request the Credit from Comcast within 30 days of the Service Interruption.

9.2 Exceptions to Credit Allowances. Except as otherwise provided in the General Terms and Conditions, a Service Interruption shall not qualify for the Credits set forth herein if such Service Interruption is related to, associated with, or caused by: scheduled maintenance events;

Customer actions or inactions; Customer-provided power or equipment; any third party not contracted through Comcast, including, without limitation, Customer's users, third-party network providers; any power, equipment or services provided by third parties; or an event of force majeure as defined in this Agreement, unless otherwise provided under applicable law. The remedies set forth in this Article 11 shall be Customer's sole and exclusive remedy for any Service Interruption in the Services, outage, unavailability, delay or other degradation in the Services or any Comcast failure to meet the objectives of the Services.

#### 10. STATE-SPECIFIC PROVISIONS APPLICABLE TO INTERNET SERVICE

##### 10.1 Service Interruption.

(1) Montgomery County, MD Customers. Under its franchise with Montgomery County, MD, Comcast has the following rebate policy: In the event of an Internet Service Interruption (loss of cable modem service) Comcast shall repair the Service Interruption as soon as possible. This obligation is satisfied if Comcast offers Customer the next available repair appointment within the 24-hour period following the Service Interruption, or at Customer's request, to a mutually convenient later time for the repair call, and successfully repairs the Service Interruption during the agreed upon appointment. If the Service Interruption is not repaired at the time of the scheduled appointment, Customer will receive a prorated credit for each 24-hour period, or segment thereof, that the Service Interruption continues beyond the scheduled repair call. Customer may contact Comcast at (301) 424-4400.

#### ARTICLE 11: ADDITIONAL TERMS APPLICABLE TO PRIVATE WI-FI AND PUBLIC WI-FI (INCLUDING WI-FI HOTSPOT SERVICES) SERVICES

If Customer submits a Sales Order(s) for Private Wi-Fi ("Private Wi-Fi Services") and Public Wi-Fi (including Hot Spot Service, "Public Wi-Fi Services") services (collectively "Wi-Fi Services") the following terms shall also apply:

11.1 Limitation. Subject to service availability, Customer may order Wi-Fi Services to provide Internet connectivity to certain areas of the Service Location as further described below. Wi-Fi Services are not intended for use within residential dwellings or for multi-tenant use (i.e. common areas within a mall or office building). In order to order and retain Wi-Fi Service with Comcast, Customer must have Internet Service at the applicable Service Location. Comcast shall have no liability for loss of Wi-Fi Services which results from Customer's failing to maintain Internet Service at the Service Location.

(a) Private Wi-Fi Services are offered together with Public Wi-Fi Services, and may not be ordered separately.

(b) Public Wi-Fi Services may be order with or without Private Wi-Fi Services.

11.2 Term and Termination. Wi-Fi Services are offered on a month to month basis. Customer shall have the right to terminate Wi-Fi Services, at any time, for any reason, upon thirty (30) days prior written notice to Comcast, subject to payment of all outstanding amounts due for the Wi-Fi Services, if any, and the return of any and all Comcast Equipment. Termination of Wi-Fi Services is not subject to Termination Charges. Wi-Fi Services will terminate simultaneously with Customer's Internet Services.

11.3 Supplemental Terms. Comcast agrees to provide Wi-Fi Services pursuant to the General Terms and Conditions and the supplemental Wi-Fi Terms and Conditions located at <http://business.comcast.com/wifi/hotspot-terms> ("Wi-Fi Terms and Conditions"). Comcast may at its sole option change or modify the Wi-Fi Terms and Conditions, and any related policies from time to time ("Revisions") by posting such Revisions to the Comcast website at the above URL. The Revisions are effective upon posting.

Exhibit D

COMCAST ENTERPRISE SERVICES PRODUCT SPECIFIC ATTACHMENT – ETHERNET  
DEDICATED INTERNET SERVICES

**COMCAST ENTERPRISE SERVICES  
PRODUCT-SPECIFIC ATTACHMENT  
ETHERNET DEDICATED INTERNET SERVICES**

**ATTACHMENT IDENTIFIER: Ethernet Dedicated Internet, Version 1.9**

The following additional terms and conditions are applicable to Sales Orders for Comcast's Ethernet Dedicated Internet Service:

## **DEFINITIONS**

Capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the General Terms and Conditions.

**"Estimated Availability Date"** means the target date for delivery of Service.

**"HFC Network"** means a hybrid fiber coax network

**"Interconnection Facilities"** means transmission capacity provided by Comcast, Customer or a third-party supplier to extend the Comcast Equipment from a Comcast terminal to any other location (e.g., a local loop provided by a local exchange company or other communications company).

**"Off-Net"** means geographical locations that are outside of Comcast's service area and/or geographical locations that are within Comcast's service area generally, but are not readily accessible by Comcast network facilities. All Off-Net Services are provided by third-party service providers. Off-Net Services provisioned over a fiber optic network are referred to as **"Off-Net Fiber."**

**"On-Net"** means geographical locations where Comcast currently provides Services through its Comcast network. On-Net Services may be provisioned over a fiber optic network ("On-Net Fiber"), or via a HFC Network ("On-Net HFC"), as available through Comcast.

**"Service(s)"** means Ethernet Dedicated Internet Services.

## **ARTICLE 1. SERVICES**

This attachment shall apply to Ethernet Dedicated Internet Service. A further description of the Service is set forth in **Schedule A-1** hereto which is incorporated herein by reference.

## **ARTICLE 2. PROVIDER**

On-Net Service shall be provided by Comcast Business Communications, LLC.

On-Net Service provided over the HFC Network and Off-Net Services are available in a limited number of markets. For information on service availability, call 866-429-0152.

## **ARTICLE 3. RESERVED.**

## **ARTICLE 4. PROVISIONING INTERVAL**

Following its acceptance of a Sales Order, Comcast shall notify Customer of the Estimated Availability Date applicable to that Sales Order. Comcast shall use commercially reasonable efforts to provision the Services on or before the Estimated Availability Date; provided, however, that Comcast's failure to provision by said date shall not constitute a breach of the Agreement.

## **ARTICLE 5. SERVICE COMMENCEMENT DATE**

Comcast shall inform Customer when Service is available and performing in accordance with the "Technical Specifications" set forth in Schedule A-1 hereto ("Availability Notification"). Charges for Service shall begin to accrue as of the Service Commencement Date. The Service Commencement Date shall be earliest of: (A) the date on which Customer confirms receipt of and concurrence with the Availability Notification; (B) five (5) business days following the date of the Availability Notification, if Customer fails to notify Comcast that the Service does not comply materially with the Technical Specifications (defined in Article 8); or (C) the date on which Customer first uses the Service. In the event that a Service Term has not been expressly set forth in a Sales Order, the Service Term for such Sales Order shall be twelve (12) months

## **A. ARTICLE 6. RESERVED**

**6.1**

**ARTICLE 7. ADDITIONAL INFORMATION**

As necessary for the interconnection of the Service with services provided by third parties, Comcast may request (as applicable), and Customer will provide to Comcast, circuit facility assignment information, firm order commitment information, and design layout records necessary to enable Comcast to make the necessary cross-connection between the Service and Customer's other service provider(s). Comcast may charge Customer nonrecurring and monthly recurring cross-connect charges to make such connections.

**ARTICLE 8. TECHNICAL SPECIFICATIONS; SERVICE LEVEL AGREEMENT**

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The technical specifications applicable to the Service are set forth in Schedule A-1 hereto ("Technical Specifications"). The service level agreement applicable to the Service is set forth in a Schedule A-2 hereto and incorporated herein by reference.

**COMCAST ENTERPRISE SERVICES  
PRODUCT-SPECIFIC ATTACHMENT  
ETHERNET DEDICATED INTERNET SERVICES**

**SCHEDULE A-1  
SERVICE DESCRIPTIONS AND TECHNICAL SPECIFICATIONS  
COMCAST ETHERNET DEDICATED INTERNET SERVICES**

Comcast's Ethernet Dedicated Internet Service will be provided in accordance with the service descriptions and technical specifications set forth below:

**Service Descriptions**

**Ethernet Dedicated Internet Service ("EDI")**. EDI provides reliable, simple, and flexible access to the Internet. The Service is offered in the Ethernet User-to-Network Interfaces ("UNI") increments identified in Figure 1 below and is available in Committed Information Rate ("CIR") speed increments starting at 1Mbps, subject to available capacity. The Service provides an Ethernet Virtual Connection ("EVC") from the Customer Service Location to a Comcast Internet Point of Presence ("POP") router.

**Threat Management Services ("TMS")**. TMS is a managed security service that includes threat mitigation functionality to respond to certain types of distributed denial of service ("DDoS") attacks, including volumetric and flood attacks. TMS Service is available to Customer on either an emergency or subscription basis, both of which requires the purchase of EDI.

**1. Emergency DDoS Mitigation Service ("Emergency Service")**. Upon notification of suspicious traffic from Customer, Comcast will analyze traffic for anomaly detection and patterns to determine whether the business is under a DDoS attack. In performing this analysis Comcast will gather the appropriate network information (e.g., routable IP addresses). When authorized by Customer via the execution of a Sales Order Form, which will include relevant fees, Comcast will redirect Customer's incoming Internet traffic to Comcast scrubbing centers where malicious traffic matching specific attack vectors will be filtered and legitimate traffic will be re-routed back to Customer's network.

**2. Subscription DDoS Mitigation Service ("Subscription Service")**.

A. The Subscription Service is a subscription-based Service offering that provides Customer with proactive network detection of DDoS attack traffic, alert notifications, and mitigation of attacks. Upon receipt of complete and accurate Customer contact and network information, Comcast will configure Customer's site(s), related IP addresses, and preconfigure countermeasure options. Customer will be notified to contact Comcast to perform an acceptance test. Customer has five (5) business days to contact Comcast to initiate the acceptance test to confirm that the Subscription Service is configured in accordance with Customer's preferences after activation and to verify the operation of Subscription Service. .

B. Comcast monitors the Customer network traffic for a specified set of IP addresses. When DDoS attack traffic is detected, an alert will be sent to both the Comcast operations center and the Customer via email and SMS. During the mitigation, Comcast will redirect Customer's incoming Internet traffic to Comcast scrubbing centers where malicious traffic matching specific attack vectors will be filtered and legitimate traffic will be re-routed back to Customer's network. After mitigation is terminated, all traffic is re-directed back to Customer's network via normal paths.

C. Customer has a choice of On-Demand or Automatic mitigation options under the Subscription Service:

- a. **On-Demand**. Customer must authorize Comcast by phone to initiate mitigation. Time to mitigate (the "Mitigation Interval") is the elapsed time from when the customer authorizes Comcast to enable mitigation until Comcast initiates mitigation of any attack traffic.

b. Automatic. With the Automatic mitigation option, no Customer intervention is required. Comcast's scrubbing platform automatically initiates mitigation when an alert is generated due to the detection of attack traffic exceeding pre-set thresholds. The Mitigation Interval is the elapsed time from when the alert is generated to when Comcast initiates mitigation of any attack traffic.

D. For those Customers receiving the Subscription Service that request additional Mitigation Incidents beyond the pre-determined limits ordered, incremental charges may apply. A "Mitigation Incident" is defined as one (1) twenty-four (24) hour window in which Comcast provides Customer with DDoS mitigation assistance as set forth above.

**3. Disclaimer.** Customer acknowledges the following additional terms for the DDoS Mitigation Services

- A. When Customer Internet traffic is traversing Comcast mitigation platform, Comcast makes no guarantees that only DDoS attack traffic will be prevented from reaching the Service Location nor that only legitimate traffic will be allowed to reach Customer.
- B. Comcast mitigation constitutes only one component of Customer's overall security program and is not a comprehensive security solution; instead the DDoS Mitigation Service is intended to mitigate the impacts of certain types of DDoS attacks that are already underway
- C. Comcast makes no warranty, express or implied, that: (i) all DDoS attacks will be detected (for Customers receiving the Subscription Service); (ii) the mitigation efforts implemented by Comcast in response to such DDoS attacks will be successful in mitigating the overall impact of the incident; or (iii) or that Comcast detection, alerting, and/or mitigation will be uninterrupted or error-free. Customer also understands that there may be volumetric based attacks that exceed the amount of traffic volume that Comcast can successfully divert.
- D. Comcast's ability to provide the DDoS Mitigation Services is contingent on Customer providing accurate and timely information to Comcast, including the provision of IP addresses.

**EDL Technical Specifications.**

**1. Ethernet User-to-Network Interface.** The Service provides the bidirectional, full duplex transmission of untagged Ethernet frames using a standard IEEE 802.3 Ethernet interface (UNI) to attach to the Customer's router. Figure 1 lists the available UNI speed and their UNI Physical Interfaces, and available CIR bandwidth increments and Committed Burst Sizes (CBS). CIR increments of less than 10 Mbps are generally not available in conjunction with Off-Net Services.

| UNI Speed | UNI Physical Interface   | CIR Increments | CBS (bytes) |
|-----------|--------------------------|----------------|-------------|
| 100 Mbps  | 100BaseT                 | 1 Mbps         | 25,000      |
| 1 Gbps    | 1000Base T or 1000BaseSX | 10 Mbps        | 250,000     |
| 10 Gbps   | 10GBase-SR or 10GBase-LR | 100 Mbps       | 2,500,000   |
| 100 Gbps  | 100GBASE-LR4             | 1 Gbps         | 25,000,000  |
|           |                          | 10 Gbps        | 25,000,000  |

**Figure 1: Available UNI interface types and CBS values for different CIR Increments**

**2. Traffic Management.** Comcast's network traffic-policing policies restrict traffic flow to the subscribed, CIR. If the Customer-transmitted bandwidth rate exceeds the subscription rate CIR and CBS, Comcast will discard the non-conformant packets. The Customer's router must shape traffic to the contracted CIR. Traffic management policies associated with any Off-Net portions of Service will conform to the policies enforced by the third-party service provider.

**3. Maximum Frame Size.** The Service supports a maximum transmission unit ("MTU") frame size of 1518 bytes including Layer 2 Ethernet header and FCS.

**4. Layer 2 Control Protocol ("L2CP") Processing.** All L2CP frames are discarded at the UNI.

**5. IP Address Allocation.** IP address space is a finite resource that is an essential requirement for all Internet access services. Comcast assigns up to two (2) routable IP addresses to each customer circuit. Customer can obtain additional IP addresses if required based on American Registry for Internet Numbers ("ARIN") guidelines and by completing an IP address

request form; additional charges may apply.

6. **Domain Name Service.** Comcast provides primary and secondary Domain Name Service (“DNS”). DNS is the basic network service that translates host and domain names into corresponding IP addresses, and vice-versa.

7. **Border Gateway Protocol (“BGP”) Routing.** Comcast supports BGP-4 routing (“BGP-4”) as an optional service feature. BGP-4 allows Customers to efficiently multi-home across multiple ISP networks. This optional service feature requires an Autonomous System Number (ASN) be assigned to a customer by the ARIN. Customers should also be proficient in BGP routing protocol to provision and maintain this optional service feature on their router. Additional information and requirements for BGP routing will be provided to the Customer upon request. Comcast supports private peering if the Customer is multi-homed only to Comcast’s network.

8. **Monitoring, Technical Support and Maintenance**

1. **Network Monitoring.** Comcast monitors On-Net Service on a 24x7x365 basis.

2. **Technical Support.** Comcast provides a toll-free trouble reporting telephone number to the Comcast Enterprise Technical Support (“ETS”) center that operates on a 24x7x365 basis. Comcast provides technical support for Service-related inquiries. ETS will not offer consulting or advice on issues relating to CPE or other equipment not provided by Comcast.

A. Escalation. Reported troubles are escalated within the ETS to meet the response/restoration objectives described below (Response and Restoration Standards). Service issues are escalated within Comcast ETS as follows: to a Supervisor at the end of the applicable objective time interval plus one (1) hour; to a Manager at the end of the applicable objective time interval plus two (2) hours, and to a Director at the end of the applicable objective time interval plus four (4) hours.

B. Maintenance. Comcast’s standard maintenance window for On-Net Services is Sunday to Saturday from 12:00am to 6:00am local time. Scheduled maintenance for On-Net Services is performed during the maintenance window and will be coordinated between Comcast and the Customer. Comcast provides a minimum of forty-eight (48) hour notice for non-service impacting scheduled maintenance. Comcast provides a minimum of seven (7) days’ notice for service impacting planned maintenance. Emergency maintenance is performed as needed without advance notice to Customer. Maintenance for Off-Net Services shall be performed in accordance with the applicable third party service provider rules. Therefore, maintenance for Off-Net Service may be performed without advance notice to Customer.

3. Comcast provides certain Comcast Equipment for provisioning its Services and the delivery of the UNI, which will reside on the Customer-side of the Demarcation Point. Comcast will retain ownership and management responsibility for this Comcast Equipment. This Comcast Equipment must only be used for receipt of the Services. Customers are required to shape their egress traffic to the CIR identified in the Sales Order. Comcast will be excused from paying SLA credits, as set forth in Schedule A-2, if the Service Interruption is the result of Customer’s failure to shape their traffic to the contracted CIR or utilizing Comcast Equipment for non-Comcast provided Services.

**Response and Restoration Standards**

Comcast has the following response and restoration objectives:

| CATEGORY   | OBJECTIVE  | MEASUREMENT             | REMEDIES               |
|--|------------|-------------------------|------------------------|
| <i>Mean Time to Respond Telephonically to Call</i>   | 15 minutes | Averaged over one Month | Escalation (see above) |
| <i>Mean Time to Restore On-Net Comcast Equipment</i> | 4 hours    | Averaged over one Month | Escalation (see above) |
| <i>Mean Time to Restore Off-Net Equipment</i>        | 6 hours    | Averaged over one Month | Escalation (see above) |
| <i>Mean Time to Restore On-Net Services</i>          | 6 hours    | Averaged over one Month | Escalation (see above) |
| <i>Mean Time to Restore Off-Net Services</i>         | 9 hours    | Averaged over one Month | Escalation (see above) |

Customer shall bear any expense incurred, *e.g.*, dispatch/labor costs, where a Service Interruption is found to be the fault of Customer, its end users, agents, representatives or third-party suppliers.

**COMCAST ENTERPRISE SERVICES**  
**PRODUCT-SPECIFIC ATTACHMENT**  
**ETHERNET DEDICATED INTERNET SERVICES**

**SCHEDULE A-2**  
**SERVICE LEVEL AGREEMENT**

Comcast’s Ethernet Dedicated Internet Service is backed by the following Service Level Agreement (“SLA”):

**A. Definitions**

Capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the Ethernet Dedicated Internet Services PSA or the General Terms and Conditions.

“**Planned Service Interruption**” means any Service Interruption caused by planned work such as scheduled maintenance or planned enhancements or upgrades to the network.

“**Service Interruption**” means an interruption in transmission that renders the Service unusable due to a total loss of signal for the Service. The Service shall be “Available” in the absence of a Service Interruption.

**B. EDI Service Level Agreements**

1. Availability SLAs. Comcast’s liability, and Customer’s sole remedy for Service Interruptions, and errors, omissions, interruptions, delays, outages, or defects in transmission or switching of any Service (individually or collectively, “Liability”), shall be limited to the amounts set forth in the Tables below (“Credit”). For the purposes of calculating credit for a Service Interruption, the “Length of Service Interruption” begins when the Customer reports such Service Interruption and a trouble ticket is opened, and concludes upon the closing of the same trouble ticket or, if sooner, the termination of the Service Interruption less any time Comcast is awaiting additional information or premises testing from the Customer. In no event shall the total amount of Credit issued to Customer’s account on a per-month basis exceed 50% of the total monthly recurring charge (“MRC”) associated with the impacted portion of the Service set forth in the Sales Order. The Length of Service Interruptions will not be aggregated for purposes of determining Credit allowances. To qualify, Customer must request the Credit from Comcast within thirty (30) days of the beginning of the Service Interruption. Comcast shall not incur any Liability, including Credit, for any failure of the Services caused by force majeure events, Planned Service Interruptions, Customer actions, omission or equipment, CPE, or any other items set forth in the “Exceptions to Credit Allowances” section below.

**TABLE 1: Availability SLA for Services provided over On-Net Fiber (99.99% Availability)**

| <b>Length of Service Interruption:</b>   | <b>Amount of Credit:</b> |
|--|--------------------------|
| Less than 4 minutes                      | None                     |
| At least 4 minutes but less than 4 hours | 5% of Total MRC          |
| At least 4 hours but less than 8 hours   | 10% of Total MRC         |
| At least 8 hours but less than 12 hours  | 20% of Total MRC         |
| At least 12 hours but less than 16 hours | 30% of Total MRC         |
| At least 16 hours but less than 24 hours | 40% of Total MRC         |
| At least 24 hours or greater             | 50% of Total MRC         |

**TABLE 2: Availability SLA for Services provided over Off-Net Fiber (99.95% Availability)**

| <b>Length of Service Interruption:</b>    | <b>Amount of Credit:</b> |
|---|--------------------------|
| Less than 20 minutes                      | None                     |
| At least 20 minutes but less than 4 hours | 5% of Total MRC          |
| At least 4 hours but less than 8 hours    | 10% of Total MRC         |
| At least 8 hours but less than 12 hours   | 20% of Total MRC         |
| At least 12 hours but less than 16 hours  | 30% of Total MRC         |
| At least 16 hours but less than 24 hours  | 40% of Total MRC         |
| At least 24 hours or greater              | 50% of Total MRC         |

**TABLE 3: Availability SLA for Services provided over On-Net HFC or Off-Net Non-Fiber Transport (99.9% Availability)**

| <b>Length of Service Interruption:</b>    | <b>Amount of Credit:</b> |
|---|--------------------------|
| Less than 40 minutes                      | None                     |
| At least 40 minutes but less than 4 hours | 5% of Total MRC          |
| At least 4 hours but less than 8 hours    | 10% of Total MRC         |
| At least 8 hours but less than 12 hours   | 20% of Total MRC         |
| At least 12 hours but less than 16 hours  | 30% of Total MRC         |
| At least 16 hours but less than 24 hours  | 40% of Total MRC         |
| At least 24 hours or greater              | 50% of Total MRC         |

THE TOTAL CREDIT ALLOWANCES PER CALENDAR MONTH IS CAPPED AT 50% OF THAT MONTH'S MRC FOR THE INTERRUPTED PORTIONS OF SERVICE. SEPARATELY OCCURRING SERVICE INTERRUPTIONS ARE NOT AGGREGATED FOR THE PURPOSES OF DETERMINING CREDIT ALLOWANCES.

**2. DDoS Mitigation Services Service Level Agreement**

a. Service Delivery Interval

For a customer adding Subscription Service to a new EDI service, the Subscription Service delivery interval will be the same as the EDI service delivery interval. For a customer with existing EDI service, Comcast will configure and activate Customer's Subscription Service within ten (10) business days of submitting the order for Subscription Service.

| Service Delivery Option                          | Service Delivery Interval                                   | Remedy                     |
|--|---|----------------------------|
| Add Subscription Service to New EDI Service      | At time of EDI service delivery                             | No Credit                  |
|  | More than twenty-four (24) hours after EDI service delivery | 50% of the DDoS Set-Up fee |
| Add Subscription Service to Existing EDI Service | Less than or equal to 10 business days                      | No Credit                  |
|  | More than 10 business days                                  | 50% of the DDoS Set-Up fee |

b. Mitigation Interval

| Service                      | Mitigation Option                                 | Mitigation Interval  | Remedy                          |
|------------------------------|---|--|---------------------------------|
| Emergency DDoS Mitigation    | N/A   | Less than or equal to 60 minutes                                 | No Credit                       |
|                              |   | Greater than 60 minutes  | One day of Daily Mitigation fee |
| Subscription DDoS Mitigation | On Demand* (whether Single Incident or Unlimited) | Less than or equal to 15 minutes from Customer authorization     | No Credit                       |
|                              |   | Greater than 15 minutes from Customer authorization              | 1/30 of DDOS MRC                |
|                              | Automatic**                                       | Less than or equal to 5 minutes from discovery of attack traffic | No Credit                       |
|                              |   | Greater than 5 minutes from discovery of attack traffic          | 1/30 of DDOS MRC                |

\*After receipt of Customer's notification of suspicious Internet traffic and Comcast's acceptance of the Sales Order or Customer request, Comcast shall commence On Demand Mitigation within the above stated Mitigation Intervals. \*\*Upon identification of suspicious Internet traffic by Comcast threat detection platform, Comcast shall commence Automatic Mitigation within the above stated Mitigation Interval.

Comcast failure to meet the above Mitigation Intervals shall not constitute a Service Interruption. The SLAs and available credits for EDI Service identified above will not apply during the time period any Comcast-imposed Threat Management countermeasures are in place.

Customer shall be entitled to up to one credit per day and, for any billing month, Credits may not exceed fifty percent (50%) of the total MRC of the Subscription Service.

In order to receive a Credit for Comcast's failure to meet the DDoS Mitigation SLA detailed above, Customer must open a trouble ticket with Comcast. Customer must request a credit within sixty (60) days following the initial attack event.

### **C. Exceptions and Terms applicable to all SLAs**

#### **Emergency Blocking**

The parties agree that if either Party hereto, in its reasonable and sole discretion, determines that an emergency action is necessary to protect its own network, the Party may, after engaging in reasonable and good faith efforts to notify the other Party of the need to block, block any transmission path over its network by the other Party where transmissions do not meet material standard industry requirements. The Parties further agree that none of their respective obligations to one another under the Agreement will be affected by any such blockage except that the Party affected by such blockage will be relieved of all obligations to make payments for charges relating to the circuit(s) which is so blocked and that no Party will have any obligation to the other Party for any claim, judgment or liability resulting from such blockage.

#### **Remedy Processes**

All claims and rights arising under this Service Level Agreement must be exercised by Customer in writing within thirty (30) days of the event that gave rise to the claim or right. The Customer must submit the following information to the Customer's Comcast account representative with any and all claims for credit allowances: (a) Organization name; (b) Customer account number; and (c) basis of credit allowance claim (including date and time, if applicable). Comcast will acknowledge and review all claims promptly and will inform the Customer by electronic mail or other correspondence whether a credit allowance will be issued or the claim rejected, with the reasons specified for the rejection.

#### **Exceptions to Credit Allowances**

A Service Interruption shall not qualify for the remedies set forth herein if such Service Interruption is related to, associated with, or caused by: scheduled maintenance events; Customer actions or inactions; Customer-provided power or equipment; any third party not contracted through Comcast, including, without limitation, Customer's users, third-party network providers, any power, equipment or services provided by third parties; or an event of force majeure as defined in the Agreement.

#### **Other Limitations**

The remedies set forth in this Service Level Agreement shall be Customer's sole and exclusive remedies for any Service Interruption, Liability, outage, unavailability, delay, or other degradation, or any Comcast failure to meet the service objectives and Mitigation Intervals.

Exhibit E

COMCAST ENTERPRISE SERVICES PRODUCT SPECIFIC ATTACHMENT – ETHERNET  
TRANSPORT SERVICES

**COMCAST ENTERPRISE SERVICES  
PRODUCT-SPECIFIC ATTACHMENT  
INTRASTATE ETHERNET TRANSPORT SERVICES**

**ATTACHMENT IDENTIFIER: Intrastate Ethernet Transport, Version 1.18**

The following additional terms and conditions are applicable to Sales Orders for Comcast's Intrastate Ethernet Transport Services:

**DEFINITIONS**

Capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the General Terms and Conditions.

**"Estimated Availability Date"** means the target date for delivery of Service.

**"HFC Network"** means a hybrid fiber coax network.

**"Interconnection Facilities"** means transmission capacity provided by Comcast, Customer or a third-party supplier to extend the Comcast Equipment from a Comcast terminal to any other location (e.g., a local loop provided by a local exchange company or other communications company).

**"Off-Net"** means geographical locations that are outside of Comcast's service area and/or geographical locations that are within Comcast's service area generally, but are not readily accessible by Comcast Network facilities. All Off-Net Services are provided by third-party service providers. Off-Net Services provisioned over a fiber optic network are referred to as **"Off-Net Fiber."**

**"On-Net"** means geographical locations where Comcast currently provides Services through its Comcast Network. On-Net Services may be provisioned over a fiber optic network (**"On-Net Fiber"**), or via an HFC Network (**"On-Net HFC"**), as available through Comcast.

**"Service(s)"** means Intrastate Ethernet Transport Services.

**ARTICLE 1. SERVICES**

This attachment shall apply to Ethernet Transport Services. A further description of these Services is set forth in **Schedule A-1** hereto which is incorporated herein by reference.

**ARTICLE 2. PROVIDER AND AVAILABILITY**

Service shall be provided by Comcast Business Communications, LLC, Comcast Phone, LLC, Comcast Phone II, LLC or its applicable affiliates and subsidiaries.

Comcast offers the Service in the following states:

|            |               |               |
|------------|---------------|---------------|
| Alabama    | Arkansas      | California    |
| Colorado   | Connecticut   | Delaware      |
| Florida    | Georgia       | Illinois      |
| Indiana    | Maryland      | Massachusetts |
| Michigan   | Minnesota     | New Hampshire |
| Jersey     | Oregon        | New Jersey    |
| Tennessee  | Texas         | Pennsylvania  |
| Washington | West Virginia | Utah          |
|            |               | Virginia      |

**ARTICLE 3. REGULATORY APPROVAL; TRAFFIC MIX**

Comcast's pricing for Service may be subject to FCC, public service commission or other regulatory approval. Further, Customer represents that its use of Service hereunder will be jurisdictionally intrastate. If Customer's use of the Service now or at any time in the future is jurisdictionally interstate, Customer shall immediately notify Comcast of the same in writing. Further, Comcast reserves the right, in its reasonable sole discretion, to reclassify Customer's use of Service as jurisdictionally interstate or intrastate, as appropriate. Customer agrees to indemnify and hold Comcast harmless from any claims by third parties resulting from or arising out of Customer's failure to properly represent or certify the jurisdictional nature of its use of the Service(s). Customer's indemnification obligation is conditioned on an available appropriation and subject to the Maryland Tort Claims Act, Md. Code Ann., State Gov't Art., § 12-101 *et seq.*

**ARTICLE 4. RESERVED**

**ARTICLE 5. PROVISIONING INTERVAL**

Following its acceptance of a Sales Order, Comcast shall notify Customer of the Estimated Availability Date applicable to that Sales Order. Comcast shall use commercially reasonable efforts to provision the Service on or before the Estimated Availability Date; provided, however, that Comcast's failure to provision by said date shall not constitute a breach of the Agreement.

**ARTICLE 6. SERVICE COMMENCEMENT DATE**

Comcast shall inform Customer when Service is available and

performing in accordance with the "Technical Specifications" set forth in Schedule A-1 hereto ("**Availability Notification**"). Charges for Service shall begin to accrue as of the Service Commencement Date. The Service Commencement Date shall be earliest of: (A) the date on which Customer confirms receipt of and concurrence with the Availability Notification; (B) five (5) business days following the date of the Availability Notification, if Customer fails to notify Comcast that the Service does not comply materially with the Technical Specifications (defined in Article 9) or (C) the date on which Customer first uses the Service. In the event that a Service Term has not been expressly set forth in a Sales Order, the Service Term for such Sales Order shall be twelve (12) months.

**ARTICLE 7. RESERVED**

**ARTICLE 8. ADDITIONAL INFORMATION**

As necessary for the interconnection of the Service with services provided by third parties, Comcast may request (as

applicable), and Customer will provide to Comcast, circuit facility assignment information, firm order commitment information, and design layout records necessary to enable Comcast to make the necessary cross-connection between the Service and Customer's other service provider(s). Comcast may charge Customer nonrecurring and monthly recurring cross-connect charges to make such connections.

**ARTICLE 9. TECHNICAL SPECIFICATIONS AND PERFORMANCE STANDARDS; SERVICE LEVEL AGREEMENT**

The technical specifications applicable to the Service are set forth in Schedule A-1 hereto ("**Technical Specifications**"). The service level agreement applicable to the Service is set forth in a **Schedule A-2** hereto and incorporated herein by reference.

**COMCAST ENTERPRISE SERVICES  
PRODUCT-SPECIFIC ATTACHMENT  
INTRASTATE ETHERNET TRANSPORT SERVICES**

**SCHEDULE A-1**

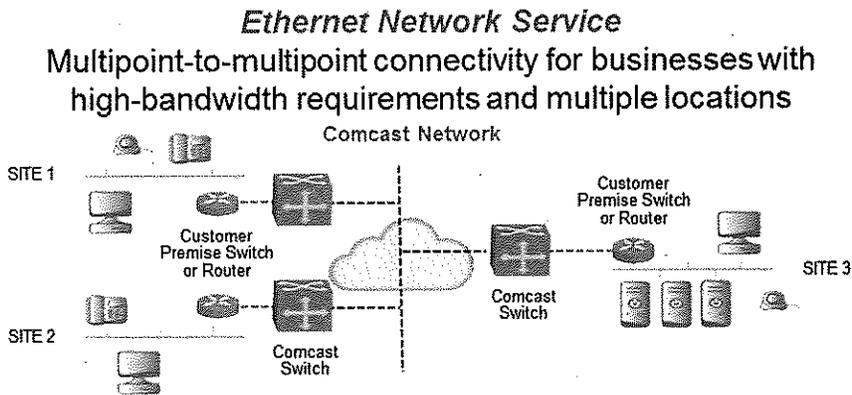
**SERVICE DESCRIPTIONS, TECHNICAL SPECIFICATIONS AND PERFORMANCE STANDARDS  
COMCAST INTRASTATE ETHERNET TRANSPORT SERVICES**

**Intrastate Ethernet Transport Version 1.15**

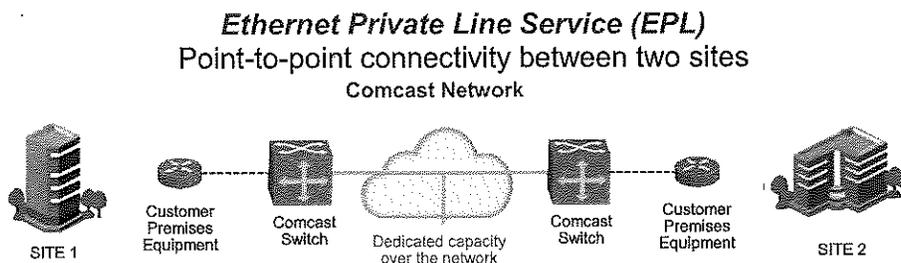
Comcast's Intrastate Ethernet Transport Services will be provided in accordance with the service descriptions, technical specifications and performance standards set forth below:

**Service Descriptions**

**Ethernet Network Service (ENS)** enables Customer to connect physically distributed locations across a Metropolitan Area Network (MAN) or Wide Area Network (WAN) as if they are on the same Local Area Network (LAN). The Service provides VLAN transparency enabling Customer to implement their own VLANs without any coordination with Comcast. ENS is a highly scalable service that enables customers to connect Customer Premises Equipment (CPE) using industry standard 100 Mbps, 1 Gbps or 10 Gbps Ethernet User-to-Network Interfaces (UNI) and is available with flexible bandwidth options from at 1 Mbps to 10 Gbps. Comcast ENS provides an Ethernet Virtual Connection (EVC) between Customer Service Locations that enables Customer to use any VLANs without coordination with Comcast. Comcast ENS offers three Classes of Service (CoS), as described below.

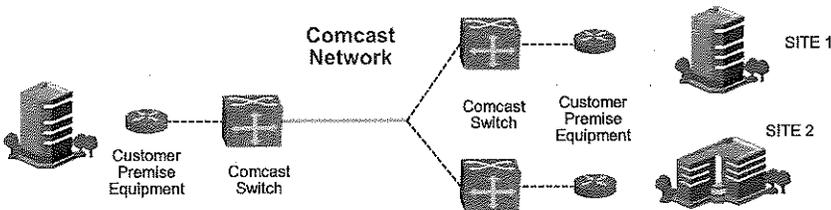


**Ethernet Private Line (EPL)** is a point-to-point transport service that provides secure, high-performance network connectivity between two Customer Service Locations. EPL is a highly scalable service that enables the Customer to connect their Customer Premises Equipment (CPE) using industry standard 100 Mbps, 1 Gbps or 10 Gbps Ethernet User-to-Network Interfaces (UNI) and is available with flexible bandwidth options from 1 Mbps to 10 Gbps. Comcast EPL provides an Ethernet Virtual Connection (EVC) between Customer Service Locations that enables the Customer to use any VLANs without coordination with Comcast. Comcast EPL offers three Classes of Service (CoS), as described below.



**Ethernet Virtual Private Line (EVPL)** service provides an Ethernet Virtual Connection (EVC) between two or more Customer Service Locations and supports the added flexibility to multiplex multiple services (EVCs) on a single UNI at the Customer’s hub or aggregation site. The Service multiplexing capability is not available at sites served by the Comcast On-Net HFC. It is a highly scalable service that enables the Customer to connect their Customer Premises Equipment (CPE) using industry standard 100 Mbps, 1 Gbps or 10 Gbps Ethernet User-to-Network Interfaces (UNI) and is available with flexible bandwidth options from 1 Mbps to 10 Gbps. Comcast EVPL offers three Classes of Service (CoS), as described below.

**Ethernet Virtual Private Line Service (EVPL)**  
Point-to-multipoint connectivity



**Multiple Access Options**

Comcast Ethernet Transport Services are available with the following access options:

- On-Net Fiber Access – Connectivity to Customer Service Locations is enabled via Comcast On-Net fiber Infrastructure.
- On-Net Hybrid Fiber Coax (HFC) Access – Connectivity to Customer Service Locations is enabled via Comcast On-Net Hybrid Fiber Coax (HFC) infrastructure.
- Off-Net Access (both Fiber and Non-Fiber) – Connectivity to Customer Service Locations is enabled through a network-to-network interface (NNI) via third-party network provider.

**Ethernet Virtual Circuit (EVC) Area Types**

Comcast Ethernet Transport Services are available both within and between certain major metropolitan areas throughout the United States. Each EVC is assigned an EVC Area Type based upon the proximity of respective A and Z locations.

- **Metro** – EVC enables connectivity between customer locations within a Comcast defined Metro.
- **Regional** – EVC enables connectivity between customer locations that are in different Comcast defined Metros, but within Comcast defined geographic Regions.
- **Continental** – EVC enables connectivity between customer locations that are in different Comcast defined geographic Regions.

**Ethernet Transport Technical Specifications**

**1. Ethernet User-to-Network Interface**

Comcast Ethernet Transport Services provide bidirectional, full duplex transmission of Ethernet frames using a standard IEEE 802.3 Ethernet interface. Comcast implements ingress policies at CPE UNI interfaces to enforce subscribed bandwidth levels. Each ingress policing policy is created utilizing Committed Information Rate (CIR) and Committed Burst Size (CBS) components. The following table provides a list of available UNI physical interfaces and their available Committed Information Rate (CIR) bandwidth increments and Committed Burst Sizes (CBS).

| UNI Speed | UNI Physical Interface      |
|-----------|-----------------------------|
| 100 Mbps  | 100BaseT                    |
| 1 Gbps    | 1000Base T or<br>1000BaseSX |
| 10 Gbps   | 10GBase-SR or<br>10GBase-LR |

| CIR Increments | CBS (bytes) |
|----------------|-------------|
| 10 Mbps        | 25,000      |
| 100 Mbps       | 250,000     |
| 1 Gbps         | 2,500,000   |
| 10 Gbps        | 25,000,000  |

## 2. Class of Service (CoS) Options

Comcast Ethernet Transport Services are available with three different class of service (CoS) options that allow for differentiated service performance levels for different types of network traffic. This includes Basic (Low), Priority (Medium) and Premium (High). CoS is used to prioritize customer mission-critical traffic from lesser priority traffic in the network. The Customer must specify a CIR for each CoS to indicate how much bandwidth should be assigned to that CoS. The performance metrics associated with each CoS are described in the Ethernet Transport Service Level Agreement on Schedule A-2 of this PSA. As described in the following table, permissible CoS options vary by access type.

| Access Type       | CoS Options               |
|-------------------|---------------------------|
| On-Net Fiber      | Basic, Priority & Premium |
| On-Net HFC        | Basic & Priority          |
| Off-Net Fiber     | Basic, Priority & Premium |
| Off-Net Non-Fiber | Basic & Priority          |

## 3. CoS Identification and Marking

Customer traffic classification and forwarding is based upon Comcast CoS prioritization that must be specified in the Customer's Sales Order. It is the Customer's responsibility to shape traffic to ordered bandwidth. If the Customer only orders a single CoS solution, they are not required to mark their packets and all Customer packets will be forwarded based upon 802.1p value associated with the CoS level specified in the Sales order. All packets, tagged or untagged, will be mapped into the subscribed CoS. If Customer implements a multi-CoS solution or for EVPL ports with service multiplexing, the Customer must mark all packets using C-tag 802.1p CoS values as specified in the table below to ensure the Service will provide the intended CoS performance objectives. For multi-CoS solutions, untagged packets will be treated as if they are marked with a 0. Packets with other 802.1p values are mapped to the lowest subscribed CoS. For EVPL ports with service multiplexing, untagged packets will be discarded and C-tag VLAN ID values are used to map traffic to applicable EVC's. Based on Ethernet Frame 802.1p values, Customer's traffic is mapped to the Comcast forwarding classes traffic accordingly to the table below:

| CoS Type          | 802.1p Marking |
|-------------------|----------------|
| Basic (Low)       | 0-1            |
| Priority (Medium) | 2-3            |
| Premium (High)    | 5              |

## 4. Mac Learning and Forwarding (ENS Service)

The ENS Service is capable of learning up to 2500 MAC addresses from all interfaces connecting to the Service. It is highly recommended that routing equipment be utilized to minimize the number of MAC addresses exposed directly to the Service in larger networks. Any addresses in excess of 2500 will not be learned and traffic directed to these addresses will be treated as "unknown unicast".

## 5. Traffic Management

Comcast's Network traffic-policing policies restrict traffic flows to the subscribed CIR for each service class. If the Customer-transmitted bandwidth rate for any CoS exceeds the subscribed committed information rate (CIR) and committed burst size (CBS), Comcast will discard the non-conformant packets. For packets marked with a non-conformant CoS marking, the Service will transmit them using the Basic CoS without altering the Customer's CoS markings. Traffic management policies associated with Off-Net Services will conform to the policies enforced by the third-party service provider.

## 6. Maximum Frame Size

Services delivered via Fiber support a Maximum Transmission Unit (MTU) frame size of 1600 bytes to support untagged, tagged and Q-in-Q traffic with 802.1q or 802.1ad encapsulation types. Services delivered via On-Net Fiber can, upon request, support a MTU up to 9100 bytes to support untagged, tagged and Q-in-Q frame sizes. Services delivered via Off-Net Fiber may, upon request, support a MTU up to 9100 bytes to support untagged, tagged and Q-in-Q frame sizes, but only, and solely, to the extent the applicable Off-Net provider can support such MTU frame size. Services delivered via HFC support a Maximum Transmission Unit (MTU) frame size of 1522 bytes. All frames that exceed specifications shall be dropped.

| Transport Type | MTU Size        |
|----------------|-----------------|
| Fiber          | 1600-9100 bytes |
| HFC            | 1522 bytes      |

## 7. Customer Traffic Transparency

All fields within customers Ethernet frames (unicast, multicast and broadcast, except L2CP) from the first bit of payload are preserved and transparently transported over UNI to UNI connections, as long as they are mapped into the EVC.

## 8. Ethernet Service Frame Disposition

The Comcast Transport Services process different types of Ethernet frames differently. Frames may pass unconditionally through the Network or may be limited, as indicated in the table below, to ensure acceptable service performance. The following table illustrates Comcast's service frame disposition for each service frame type.

| Service Frame Type | ENS Frame Delivery                   | EPL & EVPL Frame Delivery            |
|--------------------|--------------------------------------|--------------------------------------|
| Unicast            | All frames delivered unconditionally | All frames delivered unconditionally |
| Multicast          | All frames delivered conditionally   | All frames delivered unconditionally |
| Broadcast          | All frames delivered conditionally   | All frames delivered unconditionally |

### *ENS Services only:*

- Unicast Traffic. Unicast traffic must be bi-directional in order to facilitate mac-learning and avoid restriction.
- Multicast Traffic. By default, every ENS port is able to support up to 2 Mbps of multicast traffic. ENS customer who requires greater than 2 Mbps of multicast bandwidth must uniquely specify the bandwidth they require for each root site and associated Class of Service.
- Broadcast Traffic. Broadcast and unknown unicast traffic are restricted to 1.2mb or 300pps on ingress to the network.

### *EVPL Services only:*

- Customer is responsible for mapping multicast, broadcast and unknown unicast traffic to specific C-VLAN.

**Monitoring, Technical Support and Maintenance**

1. **Network Monitoring.** Comcast monitors On-Net Services on a 24x7x365 basis.
2. **Technical Support.** Comcast provides a toll-free trouble reporting telephone number to the Comcast Enterprise Technical Support (ETS) center that operates on a 24x7x365 basis. Comcast provides technical support for service related inquiries. Technical support will not offer consulting or advice on issues relating to CPE or other equipment not provided by Comcast.
  - (a) **Escalation.** Reported troubles are escalated within the Comcast Business Services Network Operations Center (BNOC) to meet the response/restoration interval described below (Response and Restoration Standards). Service issues are escalated within the Comcast BNOC as follows: to a Supervisor at the end of the applicable time interval plus one (1) hour; to a Manager at the end of the applicable time interval plus two (2) hours, and to a Director at the end of the applicable time interval plus four (4) hours.
  - (b) **Maintenance.** Comcast’s standard maintenance window for On-Net Services is Sunday to Saturday from 12:00am to 6:00am local time. Scheduled maintenance for On-Net Services is performed during the maintenance window and will be coordinated between Comcast and the Customer. Comcast provides a minimum forty eight (48) hour notice for non-service impacting maintenance. Comcast provides a minimum of seven (7) days’ notice for On-Net Service impacting planned maintenance. Emergency maintenance is performed as needed without advance notice to Customer. Maintenance for Off-Net Services shall be performed in accordance with the applicable third party service provider rules. Therefore, maintenance for Off-Net Service may be performed without advance notice to Customer.
  - (c) Comcast provides certain Comcast Equipment for provisioning its Services and the delivery of the UNI, which will reside on the Customer-side of the Demarcation Point. Comcast will retain ownership and management responsibility for this Comcast Equipment. This Comcast Equipment must only be used for delivering Services. Customers are required to shape their egress traffic to the Committed Information Rate identified in the Sales Order. Comcast will be excused from paying SLA credits, as set forth in Schedule A-2, if the Service Interruption is the result of Customer’s failure to shape their traffic to the contracted CIR or utilizing Comcast Equipment for non-Comcast provided services.
3. **Response and Restoration Standards.** Comcast has the following response and restoration objectives:

| CATEGORY   | OBJECTIVE  | MEASUREMENT           | REMEDIES               |
|--|------------|-----------------------|------------------------|
| <i>Mean Time to Respond Telephonically to Call</i>   | 15 minutes | Averaged Over A Month | Escalation (see above) |
| <i>Mean Time to Restore On-Net Comcast Equipment</i> | 4 hours    | Averaged Over A Month | Escalation (see above) |
| <i>Mean Time to Restore Off-Net Equipment</i>        | 6 hours    | Averaged Over A Month | Escalation (see above) |
| <i>Mean Time to Restore On-Net Services</i>          | 6 hours    | Averaged Over A Month | Escalation (see above) |
| <i>Mean Time to Restore Off-Net Services</i>         | 9 hours    | Averaged Over A Month | Escalation (see above) |

Customer shall bear any expense incurred, e.g., dispatch/labor costs, where a Service Interruption is found to be the fault of Customer, its end users, agents, representatives or third-party suppliers.

**Customer Responsibilities**

Comcast provides an Ethernet terminating device for provisioning its services and the delivery of the UNI. Comcast will retain ownership and management responsibility for this equipment. As a result, it must only be used for delivering Comcast Services. Customer is responsible for providing customer premises equipment (CPE) to connect to this device. To ensure proper performance, Customer is required to shape its egress traffic to the contracted CIR.

Customers have the following responsibilities related to the installation, support, and maintenance of the Service:

- Provide an operating environment with temperatures not below fifty-five (55) or above eighty-five (85) degrees Fahrenheit. Humidity shall not exceed ninety (90) percent at eighty-five (85) degrees Fahrenheit.
- Provide secure space sufficient for access to one (1) standard, freestanding, equipment cabinet at each of the Customer facilities, no further than fifty feet from the Customer router or switch interface.
- Provide outside cable entry conduit(s), entry cable ground point, and internal building conduit to allow Comcast the ability to rod/rope a fiber optic cable to the Demarcation Point.
- Locate and mark all private underground utilities (water, electric, etc.) along path of new underground placement not covered by utility companies.
- Provide a pull rope in any existing duct that Comcast is to use and ensure existing duct is serviceable for Comcast use.
- Obtain 'right-of-way' entry easement for Comcast facilities and equipment from property owners at each Customer location.
- The Customer is responsible for coring of the building's outside wall and internal walls. Upon request, Comcast can perform this activity on an 'as needed' basis for an additional one-time fee.
- Provide UPS AC power equipment, circuit sizing to be determined, if applicable.
- Emergency local generator backup service, if applicable.
- Provide access to the buildings and Demarcation Point at each Customer location to allow Comcast and its approved Contractors to install fiber for service installation. Provide access to each location for regular (8am - 5pm) and emergency (24 hour) service and maintenance of Comcast's equipment and facilities.
- Provide, install and maintain a device that is capable of interconnecting network traffic between the Service and the Customer's Local Area Network (LAN).
- Customer must provide a point of contact (POC) for installation, service activation and any maintenance activities.

**COMCAST ENTERPRISE SERVICES  
PRODUCT-SPECIFIC ATTACHMENT  
INTRASTATE ETHERNET TRANSPORT SERVICES**

**SCHEDULE A-2  
SERVICE LEVEL AGREEMENT**

**Intrastate Ethernet Transport Version 1.15**

Comcast's Intrastate Ethernet Transport Services are backed by the following Service Level Agreement ("SLA"):

**A. Definitions:**

Capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the Intrastate Ethernet Transport Services PSA or the General Terms and Conditions.

**Definitions**

**"Jitter"** means the short-term variations for a portion of successfully delivered service frames. Jitter may also be referred to as Frame Delay Variation.

**"Latency"** means the maximum delay for a portion of successfully delivered service frames. Latency may also be referred to as Frame Delay.

**"Market"** means the Comcast geographic region where the applicable Service Location is located, as identified on the Sales Order.

**"Packet Loss"** means the difference between the number of service frames transmitted at the ingress UNI and the total number of service frames received at the egress UNI. Packet Loss may also be referred to as Frame Loss.

**"Planned Service Interruption"** means any Service Interruption caused by planned work such as scheduled maintenance or planned enhancements or upgrades to the network.

**"Service Interruption"** means an interruption in transmission that renders the Service unusable due to a total loss of signal for the Service. The Service shall be "Available" in the absence of a Service Interruption.

**B. Ethernet Transport Service Level Agreements**

**1. Availability SLA**

Comcast's liability and Customer's sole remedy for Service Interruptions, and errors, omissions, interruptions, delays, outages, or defects in transmission or switching of any Services (individually or collectively, "**Liability**"), shall be limited to the amounts set forth in the Tables below with the stated percentages to be applied against the MRC associated with the impacted portion of the Service set forth in the Sales Order ("**Availability Credit**"). For the purposes of calculating credit for a Service Interruption, the "Length of Service Interruption" begins when the Customer reports such Service Interruption and a trouble ticket is opened, and concludes upon the closing of the same trouble ticket or, if sooner, the termination of the Service Interruption, less any time Comcast is awaiting additional information or premises testing from the Customer. The Length of Service Interruptions for separately occurring Service Interruptions will not be aggregated for purposes of determining Availability Credit allowances. To qualify, Customer must request the Availability Credit from Comcast within thirty (30) days of the beginning of the Service Interruption. Comcast shall not incur any Liability, including Availability Credit, for any failure of the Services caused by force majeure events, Planned Service Interruptions, Customer actions, omission or equipment, CPE, or any other items set forth in the "Exceptions to Credit Allowances" section below.

**TABLE 1: Availability SLA for Services provided over On-Net Fiber (99.99% Availability)**

| <b>Length of Service Interruption:</b>   | <b>Amount of Credit:</b> |
|--|--------------------------|
| Less than 4 minutes                      | None                     |
| At least 4 minutes but less than 4 hours | 5% of Total MRC          |
| At least 4 hours but less than 8 hours   | 10% of Total MRC         |
| At least 8 hours but less than 12 hours  | 20% of Total MRC         |
| At least 12 hours but less than 16 hours | 30% of Total MRC         |
| At least 16 hours but less than 24 hours | 40% of Total MRC         |
| At least 24 hours or greater             | 50% of Total MRC         |

**TABLE 2: Availability SLA for Services provided over Off-Net Fiber (99.95% Availability)**

| <b>Length of Service Interruption:</b>    | <b>Amount of Credit:</b> |
|---|--------------------------|
| Less than 20 minutes                      | None                     |
| At least 20 minutes but less than 4 hours | 5% of Total MRC          |
| At least 4 hours but less than 8 hours    | 10% of Total MRC         |
| At least 8 hours but less than 12 hours   | 20% of Total MRC         |
| At least 12 hours but less than 16 hours  | 30% of Total MRC         |
| At least 16 hours but less than 24 hours  | 40% of Total MRC         |
| At least 24 hours or greater              | 50% of Total MRC         |

**TABLE 3: Availability SLA for Services provided over On-Net HFC or Off-Net Non-Fiber Transport (99.9% Availability)**

| <b>Length of Service Interruption:</b>    | <b>Amount of Credit:</b> |
|---|--------------------------|
| Less than 40 minutes                      | None                     |
| At least 40 minutes but less than 4 hours | 5% of Total MRC          |
| At least 4 hours but less than 8 hours    | 10% of Total MRC         |
| At least 8 hours but less than 12 hours   | 20% of Total MRC         |
| At least 12 hours but less than 16 hours  | 30% of Total MRC         |
| At least 16 hours but less than 24 hours  | 40% of Total MRC         |
| At least 24 hours or greater              | 50% of Total MRC         |

SEPARATELY OCCURRING SERVICE INTERRUPTIONS ARE NOT AGGREGATED FOR THE PURPOSES OF DETERMINING CREDIT ALLOWANCES.

## **2. Performance Objectives SLA**

Comcast Intrastate Ethernet Transport Services are available both within and between major metropolitan areas throughout the United States. The performance objectives associated with traffic flows between any two Customer Service Locations are dependent upon the locations of the respective sites, designated as Service Location A and Service Location Z on the applicable Sales Order.

### ***Access Types***

- 1. On-Net Access.** If On-Net Service Location A and On-Net Service Location Z reside within the same Market, Performance Tier 1 objectives will apply. If the On-Net Service Locations are in different Markets, a different Performance Tier will apply. The applicable Performance Tier will appear on/with the respective Sales Order.
- 2. Off-Net Access.** In addition to On-Net Access, Comcast enables Off-Net Access to Ethernet Transport Services via multiple third party providers. The Performance Tier for Off-Net Service is based upon the location of the Off-Net Service Location, the location of the Network to Network Interface (NNI) between Comcast and the third party provider and the performance commitment from the third party provider. The applicable Performance Tier will appear on the respective Sales Order.

**Performance Tiers and Performance Objectives**

Comcast collects continuous in-band performance measurements for its Ethernet Transport Services. The calculation of all Latency, Jitter and Packet Loss Performance Metrics for each calendar month for purposes of this Performance Objectives SLA are based upon the average of sample one-way measurements taken by Comcast during the applicable calendar month, excluding any period during which there is a Service Interruption. The below charts indicate the Performance Standard that should be achieved for each of the Performance Metrics over each calendar month based on the applicable Performance Tier and Class of Service.

**1. Performance Tier 1 (PT1) Agreements – Within Market**

| Performance Metric               | Class of Service (CoS) |          |         |
|----------------------------------|------------------------|----------|---------|
|                                  | Basic                  | Priority | Premium |
| Latency (One-Way Network Delay)  | 45ms                   | 23ms     | 12ms    |
| Jitter (Network Delay Variation) | 20ms                   | 10ms     | 2ms     |
| Packet Loss                      | <1%                    | <0.01%   | <0.001% |

**2. Performance Tier 2 (PT2) Agreements**

| Performance Metric               | Class of Service (CoS) |          |         |
|----------------------------------|------------------------|----------|---------|
|                                  | Basic                  | Priority | Premium |
| Latency (One-Way Network Delay)  | 80ms                   | 45ms     | 23ms    |
| Jitter (Network Delay Variation) | 25ms                   | 15ms     | 5ms     |
| Packet Loss                      | <1%                    | <.02%    | <.01%   |

**3. Performance Tier 3 (PT3) Agreements**

| Performance Metric               | Class of Service (CoS) |          |         |
|----------------------------------|------------------------|----------|---------|
|                                  | Basic                  | Priority | Premium |
| Latency (One-Way Network Delay)  | 100ms                  | 80ms     | 45ms    |
| Jitter (Network Delay Variation) | 30ms                   | 20ms     | 10ms    |
| Packet Loss                      | <1%                    | <.04%    | <.02%   |

**4. Performance Tier 4 (PT4) Agreements**

| Performance Metric               | Class of Service (CoS) |          |         |
|----------------------------------|------------------------|----------|---------|
|                                  | Basic                  | Priority | Premium |
| Latency (One-Way Network Delay)  | 120ms                  | 100ms    | 80ms    |
| Jitter (Network Delay Variation) | 35ms                   | 25ms     | 15ms    |
| Packet Loss                      | <1%                    | <.05%    | <.04%   |

**5. Best Effort Performance Tier (BE)**

No performance commitments will apply. Best Effort Performance Tier will appear on the associated Comcast Sales Order.

**Credit Allowance**

Customer’s sole remedy for Comcast’s failure to achieve the applicable Performance Metric standards above over a given calendar month for the Service are the receipt of the following credit amounts with the stated percentages to be applied against the MRC associated with the impacted portion of the Service set forth in the Sales Order (“**Performance Objective Credits**”).

**TABLE 1: Credit Allowance for Latency Performance Metric**

|                  |          | Performance Tier |           |                  |           |                  |           |                  |           |
|------------------|----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|
|                  |          | PT1              |           | PT2              |           | PT3              |           | PT4              |           |
|                  |          | Measurement (ms) | Credit    |
| Class of Service | Premium  | 0 -12            | No Credit | 0 - 23           | No Credit | 0 - 45           | No Credit | 0 to 80          | No Credit |
|                  |          | 12.01 - 23       | 10%       | 23.01 - 45       | 10%       | 45.01 - 80       | 10%       | 80.01 - 100      | 10%       |
|                  |          | 23.01 - 45       | 25%       | 45.01 - 80       | 25%       | 80.01 - 100      | 25%       | 100.01 - 120     | 25%       |
|                  |          | >45              | 50%       | >80.01           | 50%       | >100             | 50%       | >120             | 50%       |
|                  | Priority | 0 - 23           | No Credit | 0 - 45           | No Credit | 0 to 80          | No Credit | 0 to 100         | No Credit |
|                  |          | 23.01 - 45       | 10%       | 45.01 - 80       | 10%       | 80.01 - 100      | 10%       | 100.01 - 120     | 10%       |
|                  |          | 45.01 - 80       | 25%       | 80.01 - 100      | 25%       | 100.01 - 120     | 25%       | 120.01 - 150     | 25%       |
|                  |          | >80.01           | 50%       | >100             | 50%       | >120             | 50%       | >150             | 50%       |
|                  | Basic    | 0 - 45           | No Credit | 0 to 80          | No Credit | 0 to 100         | No Credit | 0 to 120         | No Credit |
|                  |          | 45.01 - 80       | 10%       | 80.01 - 100      | 10%       | 100.01 - 120     | 10%       | 120.01 - 150     | 10%       |
|                  |          | 80.01 - 100      | 25%       | 100.01 - 120     | 25%       | 120.01 - 150     | 25%       | 150.01 - 180     | 25%       |
|                  |          | >100             | 50%       | >120             | 50%       | >150             | 50%       | >180             | 50%       |

**TABLE 2: Credit Allowance for Jitter Performance Metric**

|                  |          | Performance Tier |           |                  |           |                  |           |                  |           |
|------------------|----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|
|                  |          | PT1              |           | PT2              |           | PT3              |           | PT4              |           |
|                  |          | Measurement (ms) | Credit    |
| Class of Service | Premium  | 0 - 2            | No Credit | 0 - 5            | No Credit | 0 - 10           | No Credit | 0 - 15           | No Credit |
|                  |          | 2.01 - 3         | 10%       | 5.01 - 10        | 10%       | 10.01 - 15       | 10%       | 15.01 - 20       | 10%       |
|                  |          | 3.01 - 5         | 25%       | 10.01 - 15       | 25%       | 15.01 - 20       | 25%       | 20.01 - 30       | 25%       |
|                  |          | >5               | 50%       | >15              | 50%       | >20              | 50%       | >30              | 50%       |
|                  | Priority | 0 - 10           | No Credit | 0 - 15           | No Credit | 0 - 20           | No Credit | 0 - 25           | No Credit |
|                  |          | 10.01 - 15       | 10%       | 15.01 - 20       | 10%       | 20.01 - 30       | 10%       | 25.01 - 40       | 10%       |
|                  |          | 15.01 - 20       | 25%       | 20.01 - 30       | 25%       | 30.01 - 50       | 25%       | 40.01 - 60       | 25%       |
|                  |          | >20              | 50%       | >30              | 50%       | >50              | 50%       | >60              | 50%       |
|                  | Basic    | 0 - 20           | No Credit | 0 - 25           | No Credit | 0 - 30           | No Credit | 0 - 35           | No Credit |
|                  |          | 20.01 - 30       | 10%       | 25.01 - 40       | 10%       | 30.01 - 50       | 10%       | 35.01 - 60       | 10%       |
|                  |          | 30.01 - 50       | 25%       | 40.01 - 60       | 25%       | 50.01 - 80       | 25%       | 60.01 - 90.01    | 25%       |
|                  |          | >50              | 50%       | >60              | 50%       | >80              | 50%       | >90              | 50%       |

**TABLE 3: Credit Allowance for Packet Loss Performance Metric**

|                  |          | Performance Tier |           |               |           |               |           |               |           |
|------------------|----------|------------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|
|                  |          | PT1              |           | PT2           |           | PT3           |           | PT4           |           |
|                  |          | Measurement      | Credit    | Measurement   | Credit    | Measurement   | Credit    | Measurement   | Credit    |
| Class of Service | Premium  | 0% - 0.001%      | No Credit | 0% - 0.01%    | No Credit | 0% - 0.02%    | No Credit | 0% - 0.04%    | No Credit |
|                  |          | 0.001% - 2.00%   | 10%       | 0.01% - 2.00% | 10%       | 0.02% - 2.00% | 10%       | 0.04% - 2.00% | 10%       |
|                  |          | 2.01% - 4.00%    | 25%       | 2.01% - 4.00% | 25%       | 2.01% - 4.00% | 25%       | 2.01% - 4.00% | 25%       |
|                  |          | >4.00%           | 50%       | >4.00%        | 50%       | >4.00%        | 50%       | >4.00%        | 50%       |
|                  | Priority | 0% - 0.01%       | No Credit | 0% - 0.02%    | No Credit | 0% - 0.04%    | No Credit | 0% - 0.05%    | No Credit |
|                  |          | 0.01% - 2.00%    | 10%       | 0.02% - 2.00% | 10%       | 0.04% - 2.00% | 10%       | 0.05% - 2.00% | 10%       |
|                  |          | 2.01% - 4.00%    | 25%       | 2.01% - 4.00% | 25%       | 2.01% - 4.00% | 25%       | 2.01% - 4.00% | 25%       |
|                  |          | >4.00%           | 50%       | >4.00%        | 50%       | >4.00%        | 50%       | >4.00%        | 50%       |
|                  | Basic    | 0% - 1.00%       | No Credit | 0% - 1.00%    | No Credit | 0% - 1%       | No Credit | 0% - 1%       | No Credit |
|                  |          | 1.01% - 2.00%    | 10%       | 1.01% - 2.00% | 10%       | 1.01% - 2.00% | 10%       | 1.01% - 2.00% | 10%       |
|                  |          | 2.01% - 4.00%    | 25%       | 2.01% - 4.00% | 25%       | 2.01% - 4.00% | 25%       | 2.01% - 4.00% | 25%       |
|                  |          | >4.00%           | 50%       | >4.00%        | 50%       | >4.00%        | 50%       | >4.00%        | 50%       |

Customer shall only be entitled to receive a Performance Objective Credit for one Performance Metric failure per affected portion of the Service per calendar month. For example, if the applicable metric for Jitter and Latency were missed for the same transport connection (Service Location A to Service Location Z) in a given calendar month, Customer will only be entitled to the Performance Objective Credit associated with either the Jitter or Latency failure for such portion of the Service. To qualify for a Performance Objective Credit, Customer must request the applicable Performance Objective Credit from Comcast within thirty (30) days of the end of the applicable calendar month in which the applicable Performance Metric standard was not achieved. Comcast shall not incur any liability, including Performance Objective Credit, for any failure of the Services caused by force majeure events, Planned Service Interruptions, Customer actions, omissions or equipment, CPE or any other items set forth in the "Exceptions to Credit Allowances" section below.

**C. Exceptions and Terms applicable to all SLAs**

**1. Emergency Blocking**

The Parties agree that if either Party hereto, in its reasonable sole discretion, determines that an emergency action is necessary to protect its own network, the Party may, after engaging in reasonable and good faith efforts to notify the other Party of the need to block, block any transmission path over its network by the other Party where transmissions do not meet material standard industry requirements. The Parties further agree that none of their respective obligations to one another under the Agreement will be affected by any such blockage except that the Party affected by such blockage will be relieved of all obligations to make payments for charges relating to the circuit(s) which is so blocked and that no Party will have any obligation to the other Party for any claim, judgment or liability resulting from such blockage.

**2. Remedy Processes**

All claims and rights arising under this Service Level Agreement must be exercised by Customer in writing within the time period set forth in Sections B.1 and B.2, as applicable. The Customer must submit the following information to the Customer's Comcast account representative with any and all claims for credit allowances: (a) Organization name; (b) Customer account number; and (c) basis of credit allowance claim (including date and time, if applicable). Comcast will acknowledge and review all claims promptly and will inform the Customer by electronic mail or other correspondence whether a credit allowance will be issued or the claim rejected, with the reasons specified for the rejection.

**3. Exceptions to Credit Allowances**

Comcast's failure to meet the either of the SLAs set forth on this Schedule A-2 shall not qualify for the remedies set forth herein if such failure is related to, associated with, or caused by: Planned Service Interruptions or other scheduled maintenance events; Customer actions or inactions; Customer-provided power or equipment; any third party not contracted through Comcast, including, without limitation, Customer's users, third-party network providers, any power, equipment or services provided by third parties; or an event of force majeure as defined in the Agreement.

**4. Other Limitations**

THE TOTAL CREDIT ALLOWANCES PER CALENDAR MONTH UNDER THIS SCHEDULE A-2 IS CAPPED AT 50% OF THAT MONTH'S MRC FOR THE IMPACTED PORTIONS OF SERVICE. In addition, the remedies set forth in this Service Level Agreement shall be Customer's sole and exclusive remedies for any Service Interruption, outage, unavailability, delay, or other degradation, or any Comcast failure to meet the service objectives.

Exhibit F

COMCAST ENTERPRISE SERVICES PRODUCT SPECIFIC ATTACHMENT –  
INTRASTATE ETHERNET TRANSPORT SERVICES

**COMCAST ENTERPRISE SERVICES  
PRODUCT-SPECIFIC ATTACHMENT  
INTRASTATE ETHERNET TRANSPORT SERVICES**

**ATTACHMENT IDENTIFIER: Intrastate Ethernet Transport, Version 1.18**

The following additional terms and conditions are applicable to Sales Orders for Comcast's Intrastate Ethernet Transport Services:

**DEFINITIONS**

Capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the General Terms and Conditions.

**"Estimated Availability Date"** means the target date for delivery of Service.

**"HFC Network"** means a hybrid fiber coax network.

**"Interconnection Facilities"** means transmission capacity provided by Comcast, Customer or a third-party supplier to extend the Comcast Equipment from a Comcast terminal to any other location (e.g., a local loop provided by a local exchange company or other communications company).

**"Off-Net"** means geographical locations that are outside of Comcast's service area and/or geographical locations that are within Comcast's service area generally, but are not readily accessible by Comcast Network facilities. All Off-Net Services are provided by third-party service providers. Off-Net Services provisioned over a fiber optic network are referred to as **"Off-Net Fiber."**

**"On-Net"** means geographical locations where Comcast currently provides Services through its Comcast Network. On-Net Services may be provisioned over a fiber optic network (**"On-Net Fiber"**), or via an HFC Network (**"On-Net HFC"**), as available through Comcast.

**"Service(s)"** means Intrastate Ethernet Transport Services.

**ARTICLE 1. SERVICES**

This attachment shall apply to Ethernet Transport Services. A further description of these Services is set forth in **Schedule A-1** hereto which is incorporated herein by reference.

**ARTICLE 2. PROVIDER AND AVAILABILITY**

Service shall be provided by Comcast Business Communications, LLC, Comcast Phone, LLC, Comcast Phone II, LLC or its applicable affiliates and subsidiaries.

Comcast offers the Service in the following states:

|            |               |                   |
|------------|---------------|-------------------|
| Alabama    | Arkansas      | California        |
| Colorado   | Connecticut   | Delaware          |
| Florida    | Georgia       | Illinois          |
| Indiana    | Maryland      | Massachusetts     |
| Michigan   | Minnesota     | New Hampshire New |
| Jersey     | Oregon        | Pennsylvania      |
| Tennessee  | Texas         | Utah              |
| Washington | West Virginia | Virginia          |

**ARTICLE 3. REGULATORY APPROVAL; TRAFFIC MIX**

Comcast's pricing for Service may be subject to FCC, public service commission or other regulatory approval. Further, Customer represents that its use of Service hereunder will be jurisdictionally intrastate. If Customer's use of the Service now or at any time in the future is jurisdictionally interstate, Customer shall immediately notify Comcast of the same in writing. Further, Comcast reserves the right, in its reasonable sole discretion, to reclassify Customer's use of Service as jurisdictionally interstate or intrastate, as appropriate. Customer agrees to indemnify and hold Comcast harmless from any claims by third parties resulting from or arising out of Customer's failure to properly represent or certify the jurisdictional nature of its use of the Service(s). Customer's indemnification obligation is conditioned on an available appropriation and subject to the Maryland Tort Claims Act, Md. Code Ann., State Gov't Art., § 12-101 *et seq.*

**ARTICLE 4. RESERVED**

**ARTICLE 5. PROVISIONING INTERVAL**

Following its acceptance of a Sales Order, Comcast shall notify Customer of the Estimated Availability Date applicable to that Sales Order. Comcast shall use commercially reasonable efforts to provision the Service on or before the Estimated Availability Date; provided, however, that Comcast's failure to provision by said date shall not constitute a breach of the Agreement.

**ARTICLE 6. SERVICE COMMENCEMENT DATE**

Comcast shall inform Customer when Service is available and

performing in accordance with the "Technical Specifications" set forth in Schedule A-1 hereto ("**Availability Notification**"). Charges for Service shall begin to accrue as of the Service Commencement Date. The Service Commencement Date shall be earliest of: (A) the date on which Customer confirms receipt of and concurrence with the Availability Notification; (B) five (5) business days following the date of the Availability Notification, if Customer fails to notify Comcast that the Service does not comply materially with the Technical Specifications (defined in Article 9) or (C) the date on which Customer first uses the Service. In the event that a Service Term has not been expressly set forth in a Sales Order, the Service Term for such Sales Order shall be twelve (12) months.

**ARTICLE 7. RESERVED**

**ARTICLE 8. ADDITIONAL INFORMATION**

As necessary for the interconnection of the Service with services provided by third parties, Comcast may request (as

applicable), and Customer will provide to Comcast, circuit facility assignment information, firm order commitment information, and design layout records necessary to enable Comcast to make the necessary cross-connection between the Service and Customer's other service provider(s). Comcast may charge Customer nonrecurring and monthly recurring cross-connect charges to make such connections.

**ARTICLE 9. TECHNICAL SPECIFICATIONS AND PERFORMANCE STANDARDS; SERVICE LEVEL AGREEMENT**

The technical specifications applicable to the Service are set forth in Schedule A-1 hereto ("**Technical Specifications**"). The service level agreement applicable to the Service is set forth in a **Schedule A-2** hereto and incorporated herein by reference.

**COMCAST ENTERPRISE SERVICES  
PRODUCT-SPECIFIC ATTACHMENT  
INTRASTATE ETHERNET TRANSPORT SERVICES**

**SCHEDULE A-1**

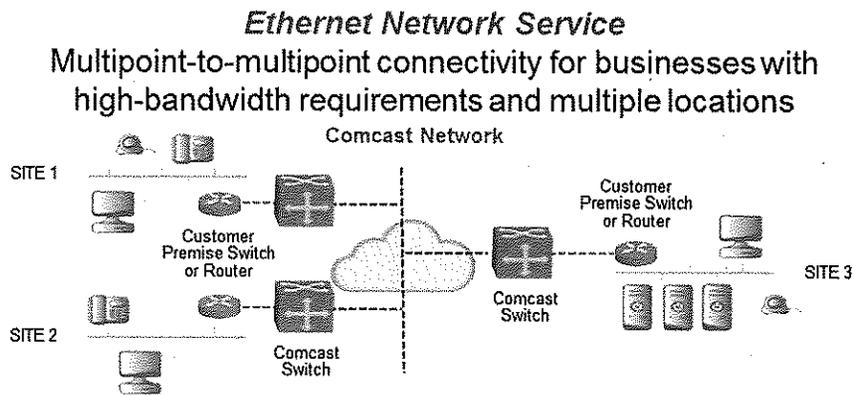
**SERVICE DESCRIPTIONS, TECHNICAL SPECIFICATIONS AND PERFORMANCE STANDARDS  
COMCAST INTRASTATE ETHERNET TRANSPORT SERVICES**

**Intrastate Ethernet Transport Version 1.15**

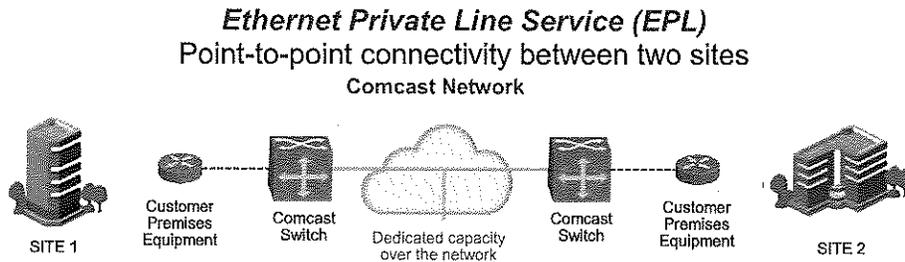
Comcast's Intrastate Ethernet Transport Services will be provided in accordance with the service descriptions, technical specifications and performance standards set forth below:

**Service Descriptions**

**Ethernet Network Service (ENS)** enables Customer to connect physically distributed locations across a Metropolitan Area Network (MAN) or Wide Area Network (WAN) as if they are on the same Local Area Network (LAN). The Service provides VLAN transparency enabling Customer to implement their own VLANs without any coordination with Comcast. ENS is a highly scalable service that enables customers to connect Customer Premises Equipment (CPE) using industry standard 100 Mbps, 1 Gbps or 10 Gbps Ethernet User-to-Network Interfaces (UNI) and is available with flexible bandwidth options from at 1 Mbps to 10 Gbps. Comcast ENS provides an Ethernet Virtual Connection (EVC) between Customer Service Locations that enables Customer to use any VLANs without coordination with Comcast. Comcast ENS offers three Classes of Service (CoS), as described below.

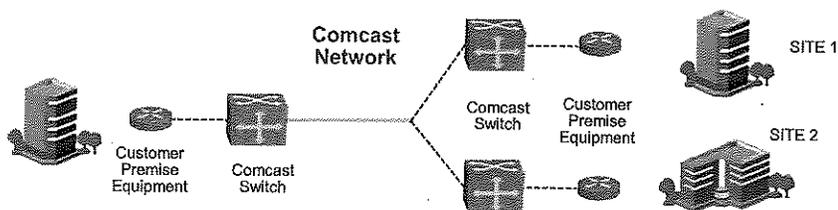


**Ethernet Private Line (EPL)** is a point-to-point transport service that provides secure, high-performance network connectivity between two Customer Service Locations. EPL is a highly scalable service that enables the Customer to connect their Customer Premises Equipment (CPE) using industry standard 100 Mbps, 1 Gbps or 10 Gbps Ethernet User-to-Network Interfaces (UNI) and is available with flexible bandwidth options from 1 Mbps to 10 Gbps. Comcast EPL provides an Ethernet Virtual Connection (EVC) between Customer Service Locations that enables the Customer to use any VLANs without coordination with Comcast. Comcast EPL offers three Classes of Service (CoS), as described below.



**Ethernet Virtual Private Line (EVPL)** service provides an Ethernet Virtual Connection (EVC) between two or more Customer Service Locations and supports the added flexibility to multiplex multiple services (EVCs) on a single UNI at the Customer's hub or aggregation site. The Service multiplexing capability is not available at sites served by the Comcast On-Net HFC. It is a highly scalable service that enables the Customer to connect their Customer Premises Equipment (CPE) using industry standard 100 Mbps, 1 Gbps or 10 Gbps Ethernet User-to-Network Interfaces (UNI) and is available with flexible bandwidth options from 1 Mbps to 10 Gbps. Comcast EVPL offers three Classes of Service (CoS), as described below.

### **Ethernet Virtual Private Line Service (EVPL) Point-to-multipoint connectivity**



### **Multiple Access Options**

Comcast Ethernet Transport Services are available with the following access options:

- On-Net Fiber Access – Connectivity to Customer Service Locations is enabled via Comcast On-Net fiber Infrastructure.
- On-Net Hybrid Fiber Coax (HFC) Access – Connectivity to Customer Service Locations is enabled via Comcast On-Net Hybrid Fiber Coax (HFC) infrastructure.
- Off-Net Access (both Fiber and Non-Fiber) – Connectivity to Customer Service Locations is enabled through a network-to-network interface (NNI) via third-party network provider.

### **Ethernet Virtual Circuit (EVC) Area Types**

Comcast Ethernet Transport Services are available both within and between certain major metropolitan areas throughout the United States. Each EVC is assigned an EVC Area Type based upon the proximity of respective A and Z locations.

- **Metro** – EVC enables connectivity between customer locations within a Comcast defined Metro.
- **Regional** – EVC enables connectivity between customer locations that are in different Comcast defined Metros, but within Comcast defined geographic Regions.
- **Continental** – EVC enables connectivity between customer locations that are in different Comcast defined geographic Regions.

### **Ethernet Transport Technical Specifications**

#### **1. Ethernet User-to-Network Interface**

Comcast Ethernet Transport Services provide bidirectional, full duplex transmission of Ethernet frames using a standard IEEE 802.3 Ethernet interface. Comcast implements ingress policies at CPE UNI interfaces to enforce subscribed bandwidth levels. Each ingress policing policy is created utilizing Committed Information Rate (CIR) and Committed Burst Size (CBS) components. The following table provides a list of available UNI physical interfaces and their available Committed Information Rate (CIR) bandwidth increments and Committed Burst Sizes (CBS).

| UNI Speed | UNI Physical Interface      |
|-----------|-----------------------------|
| 100 Mbps  | 100BaseT                    |
| 1 Gbps    | 1000Base T or<br>1000BaseSX |
| 10 Gbps   | 10GBase-SR or<br>10GBase-LR |

| CIR Increments | CBS (bytes) |
|----------------|-------------|
| 10 Mbps        | 25,000      |
| 100 Mbps       | 250,000     |
| 1 Gbps         | 2,500,000   |
| 10 Gbps        | 25,000,000  |

## 2. Class of Service (CoS) Options

Comcast Ethernet Transport Services are available with three different class of service (CoS) options that allow for differentiated service performance levels for different types of network traffic. This includes Basic (Low), Priority (Medium) and Premium (High). CoS is used to prioritize customer mission-critical traffic from lesser priority traffic in the network. The Customer must specify a CIR for each CoS to indicate how much bandwidth should be assigned to that CoS. The performance metrics associated with each CoS are described in the Ethernet Transport Service Level Agreement on Schedule A-2 of this PSA. As described in the following table, permissible CoS options vary by access type.

| Access Type       | CoS Options               |
|-------------------|---------------------------|
| On-Net Fiber      | Basic, Priority & Premium |
| On-Net HFC        | Basic & Priority          |
| Off-Net Fiber     | Basic, Priority & Premium |
| Off-Net Non-Fiber | Basic & Priority          |

## 3. CoS Identification and Marking

Customer traffic classification and forwarding is based upon Comcast CoS prioritization that must be specified in the Customer's Sales Order. It is the Customer's responsibility to shape traffic to ordered bandwidth. If the Customer only orders a single CoS solution, they are not required to mark their packets and all Customer packets will be forwarded based upon 802.1p value associated with the CoS level specified in the Sales order. All packets, tagged or untagged, will be mapped into the subscribed CoS. If Customer implements a multi-CoS solution or for EVPL ports with service multiplexing, the Customer must mark all packets using C-tag 802.1p CoS values as specified in the table below to ensure the Service will provide the intended CoS performance objectives. For multi-CoS solutions, untagged packets will be treated as if they are marked with a 0. Packets with other 802.1p values are mapped to the lowest subscribed CoS. For EVPL ports with service multiplexing, untagged packets will be discarded and C-tag VLAN ID values are used to map traffic to applicable EVC's. Based on Ethernet Frame 802.1p values, Customer's traffic is mapped to the Comcast forwarding classes traffic accordingly to the table below:

| CoS Type          | 802.1p Marking |
|-------------------|----------------|
| Basic (Low)       | 0-1            |
| Priority (Medium) | 2-3            |
| Premium (High)    | 5              |

## 4. Mac Learning and Forwarding (ENS Service)

The ENS Service is capable of learning up to 2500 MAC addresses from all interfaces connecting to the Service. It is highly recommended that routing equipment be utilized to minimize the number of MAC addresses exposed directly to the Service in larger networks. Any addresses in excess of 2500 will not be learned and traffic directed to these addresses will be treated as "unknown unicast".

## 5. Traffic Management

Comcast's Network traffic-policing policies restrict traffic flows to the subscribed CIR for each service class. If the Customer-transmitted bandwidth rate for any CoS exceeds the subscribed committed information rate (CIR) and committed burst size (CBS), Comcast will discard the non-conformant packets. For packets marked with a non-conformant CoS marking, the Service will transmit them using the Basic CoS without altering the Customer's CoS markings. Traffic management policies associated with Off-Net Services will conform to the policies enforced by the third-party service provider.

## 6. Maximum Frame Size

Services delivered via Fiber support a Maximum Transmission Unit (MTU) frame size of 1600 bytes to support untagged, tagged and Q-in-Q traffic with 802.1q or 802.1ad encapsulation types. Services delivered via On-Net Fiber can, upon request, support a MTU up to 9100 bytes to support untagged, tagged and Q-in-Q frame sizes. Services delivered via Off-Net Fiber may, upon request, support a MTU up to 9100 bytes to support untagged, tagged and Q-in-Q frame sizes, but only, and solely, to the extent the applicable Off-Net provider can support such MTU frame size. Services delivered via HFC support a Maximum Transmission Unit (MTU) frame size of 1522 bytes. All frames that exceed specifications shall be dropped.

| Transport Type | MTU Size        |
|----------------|-----------------|
| Fiber          | 1600-9100 bytes |
| HFC            | 1522 bytes      |

## 7. Customer Traffic Transparency

All fields within customers Ethernet frames (unicast, multicast and broadcast, except L2CP) from the first bit of payload are preserved and transparently transported over UNI to UNI connections, as long as they are mapped into the EVC.

## 8. Ethernet Service Frame Disposition

The Comcast Transport Services process different types of Ethernet frames differently. Frames may pass unconditionally through the Network or may be limited, as indicated in the table below, to ensure acceptable service performance. The following table illustrates Comcast's service frame disposition for each service frame type.

| Service Frame Type | ENS Frame Delivery                   | EPL & EVPL Frame Delivery            |
|--------------------|--------------------------------------|--------------------------------------|
| Unicast            | All frames delivered unconditionally | All frames delivered unconditionally |
| Multicast          | All frames delivered conditionally   | All frames delivered unconditionally |
| Broadcast          | All frames delivered conditionally   | All frames delivered unconditionally |

### *ENS Services only:*

- Unicast Traffic. Unicast traffic must be bi-directional in order to facilitate mac-learning and avoid restriction.
- Multicast Traffic. By default, every ENS port is able to support up to 2 Mbps of multicast traffic. ENS customer who requires greater than 2 Mbps of multicast bandwidth must uniquely specify the bandwidth they require for each root site and associated Class of Service.
- Broadcast Traffic. Broadcast and unknown unicast traffic are restricted to 1.2mb or 300pps on ingress to the network.

### *EVPL Services only:*

- Customer is responsible for mapping multicast, broadcast and unknown unicast traffic to specific C-VLAN.

**Monitoring, Technical Support and Maintenance**

1. **Network Monitoring.** Comcast monitors On-Net Services on a 24x7x365 basis.
  
2. **Technical Support.** Comcast provides a toll-free trouble reporting telephone number to the Comcast Enterprise Technical Support (ETS) center that operates on a 24x7x365 basis. Comcast provides technical support for service related inquiries. Technical support will not offer consulting or advice on issues relating to CPE or other equipment not provided by Comcast.
  - (a) **Escalation.** Reported troubles are escalated within the Comcast Business Services Network Operations Center (BNOC) to meet the response/restoration interval described below (Response and Restoration Standards). Service issues are escalated within the Comcast BNOC as follows: to a Supervisor at the end of the applicable time interval plus one (1) hour; to a Manager at the end of the applicable time interval plus two (2) hours, and to a Director at the end of the applicable time interval plus four (4) hours.
  
  - (b) **Maintenance.** Comcast’s standard maintenance window for On-Net Services is Sunday to Saturday from 12:00am to 6:00am local time. Scheduled maintenance for On-Net Services is performed during the maintenance window and will be coordinated between Comcast and the Customer. Comcast provides a minimum forty eight (48) hour notice for non-service impacting maintenance. Comcast provides a minimum of seven (7) days’ notice for On-Net Service impacting planned maintenance. Emergency maintenance is performed as needed without advance notice to Customer. Maintenance for Off-Net Services shall be performed in accordance with the applicable third party service provider rules. Therefore, maintenance for Off-Net Service may be performed without advance notice to Customer.
  
  - (c) Comcast provides certain Comcast Equipment for provisioning its Services and the delivery of the UNI, which will reside on the Customer-side of the Demarcation Point. Comcast will retain ownership and management responsibility for this Comcast Equipment. This Comcast Equipment must only be used for delivering Services. Customers are required to shape their egress traffic to the Committed Information Rate identified in the Sales Order. Comcast will be excused from paying SLA credits, as set forth in Schedule A-2, if the Service Interruption is the result of Customer’s failure to shape their traffic to the contracted CIR or utilizing Comcast Equipment for non-Comcast provided services.
  
3. **Response and Restoration Standards.** Comcast has the following response and restoration objectives:

| CATEGORY   | OBJECTIVE  | MEASUREMENT           | REMEDIES               |
|--|------------|-----------------------|------------------------|
| <i>Mean Time to Respond Telephonically to Call</i>   | 15 minutes | Averaged Over A Month | Escalation (see above) |
| <i>Mean Time to Restore On-Net Comcast Equipment</i> | 4 hours    | Averaged Over A Month | Escalation (see above) |
| <i>Mean Time to Restore Off-Net Equipment</i>        | 6 hours    | Averaged Over A Month | Escalation (see above) |
| <i>Mean Time to Restore On-Net Services</i>          | 6 hours    | Averaged Over A Month | Escalation (see above) |
| <i>Mean Time to Restore Off-Net Services</i>         | 9 hours    | Averaged Over A Month | Escalation (see above) |

Customer shall bear any expense incurred, e.g., dispatch/labor costs, where a Service Interruption is found to be the fault of Customer, its end users, agents, representatives or third-party suppliers.

**Customer Responsibilities**

Comcast provides an Ethernet terminating device for provisioning its services and the delivery of the UNI. Comcast will retain ownership and management responsibility for this equipment. As a result, it must only be used for delivering Comcast Services. Customer is responsible for providing customer premises equipment (CPE) to connect to this device. To ensure proper performance, Customer is required to shape its egress traffic to the contracted CIR.

Customers have the following responsibilities related to the installation, support, and maintenance of the Service:

- Provide an operating environment with temperatures not below fifty-five (55) or above eighty-five (85) degrees Fahrenheit. Humidity shall not exceed ninety (90) percent at eighty-five (85) degrees Fahrenheit.
- Provide secure space sufficient for access to one (1) standard, freestanding, equipment cabinet at each of the Customer facilities, no further than fifty feet from the Customer router or switch interface.
- Provide outside cable entry conduit(s), entry cable ground point, and internal building conduit to allow Comcast the ability to rod/rope a fiber optic cable to the Demarcation Point.
- Locate and mark all private underground utilities (water, electric, etc.) along path of new underground placement not covered by utility companies.
- Provide a pull rope in any existing duct that Comcast is to use and ensure existing duct is serviceable for Comcast use.
- Obtain 'right-of-way' entry easement for Comcast facilities and equipment from property owners at each Customer location.
- The Customer is responsible for coring of the building's outside wall and internal walls. Upon request, Comcast can perform this activity on an 'as needed' basis for an additional one-time fee.
- Provide UPS AC power equipment, circuit sizing to be determined, if applicable.
- Emergency local generator backup service, if applicable.
- Provide access to the buildings and Demarcation Point at each Customer location to allow Comcast and its approved Contractors to install fiber for service installation. Provide access to each location for regular (8am - 5pm) and emergency (24 hour) service and maintenance of Comcast's equipment and facilities.
- Provide, install and maintain a device that is capable of interconnecting network traffic between the Service and the Customer's Local Area Network (LAN).
- Customer must provide a point of contact (POC) for installation, service activation and any maintenance activities.

**COMCAST ENTERPRISE SERVICES  
PRODUCT-SPECIFIC ATTACHMENT  
INTRASTATE ETHERNET TRANSPORT SERVICES**

**SCHEDULE A-2  
SERVICE LEVEL AGREEMENT**

**Intrastate Ethernet Transport Version 1.15**

Comcast's Intrastate Ethernet Transport Services are backed by the following Service Level Agreement ("SLA"):

**A. Definitions:**

Capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the Intrastate Ethernet Transport Services PSA or the General Terms and Conditions.

**Definitions**

**"Jitter"** means the short-term variations for a portion of successfully delivered service frames. Jitter may also be referred to as Frame Delay Variation.

**"Latency"** means the maximum delay for a portion of successfully delivered service frames. Latency may also be referred to as Frame Delay.

**"Market"** means the Comcast geographic region where the applicable Service Location is located, as identified on the Sales Order.

**"Packet Loss"** means the difference between the number of service frames transmitted at the ingress UNI and the total number of service frames received at the egress UNI. Packet Loss may also be referred to as Frame Loss.

**"Planned Service Interruption"** means any Service Interruption caused by planned work such as scheduled maintenance or planned enhancements or upgrades to the network.

**"Service Interruption"** means an interruption in transmission that renders the Service unusable due to a total loss of signal for the Service. The Service shall be "Available" in the absence of a Service Interruption.

**B. Ethernet Transport Service Level Agreements**

**1. Availability SLA**

Comcast's liability and Customer's sole remedy for Service Interruptions, and errors, omissions, interruptions, delays, outages, or defects in transmission or switching of any Services (individually or collectively, "**Liability**"), shall be limited to the amounts set forth in the Tables below with the stated percentages to be applied against the MRC associated with the impacted portion of the Service set forth in the Sales Order ("**Availability Credit**"). For the purposes of calculating credit for a Service Interruption, the "Length of Service Interruption" begins when the Customer reports such Service Interruption and a trouble ticket is opened, and concludes upon the closing of the same trouble ticket or, if sooner, the termination of the Service Interruption, less any time Comcast is awaiting additional information or premises testing from the Customer. The Length of Service Interruptions for separately occurring Service Interruptions will not be aggregated for purposes of determining Availability Credit allowances. To qualify, Customer must request the Availability Credit from Comcast within thirty (30) days of the beginning of the Service Interruption. Comcast shall not incur any Liability, including Availability Credit, for any failure of the Services caused by force majeure events, Planned Service Interruptions, Customer actions, omission or equipment, CPE, or any other items set forth in the "Exceptions to Credit Allowances" section below.

**TABLE 1: Availability SLA for Services provided over On-Net Fiber (99.99% Availability)**

| <b>Length of Service Interruption:</b>   | <b>Amount of Credit:</b> |
|--|--------------------------|
| Less than 4 minutes                      | None                     |
| At least 4 minutes but less than 4 hours | 5% of Total MRC          |
| At least 4 hours but less than 8 hours   | 10% of Total MRC         |
| At least 8 hours but less than 12 hours  | 20% of Total MRC         |
| At least 12 hours but less than 16 hours | 30% of Total MRC         |
| At least 16 hours but less than 24 hours | 40% of Total MRC         |
| At least 24 hours or greater             | 50% of Total MRC         |

**TABLE 2: Availability SLA for Services provided over Off-Net Fiber (99.95% Availability)**

| <b>Length of Service Interruption:</b>    | <b>Amount of Credit:</b> |
|---|--------------------------|
| Less than 20 minutes                      | None                     |
| At least 20 minutes but less than 4 hours | 5% of Total MRC          |
| At least 4 hours but less than 8 hours    | 10% of Total MRC         |
| At least 8 hours but less than 12 hours   | 20% of Total MRC         |
| At least 12 hours but less than 16 hours  | 30% of Total MRC         |
| At least 16 hours but less than 24 hours  | 40% of Total MRC         |
| At least 24 hours or greater              | 50% of Total MRC         |

**TABLE 3: Availability SLA for Services provided over On-Net HFC or Off-Net Non-Fiber Transport (99.9% Availability)**

| <b>Length of Service Interruption:</b>    | <b>Amount of Credit:</b> |
|---|--------------------------|
| Less than 40 minutes                      | None                     |
| At least 40 minutes but less than 4 hours | 5% of Total MRC          |
| At least 4 hours but less than 8 hours    | 10% of Total MRC         |
| At least 8 hours but less than 12 hours   | 20% of Total MRC         |
| At least 12 hours but less than 16 hours  | 30% of Total MRC         |
| At least 16 hours but less than 24 hours  | 40% of Total MRC         |
| At least 24 hours or greater              | 50% of Total MRC         |

SEPARATELY OCCURRING SERVICE INTERRUPTIONS ARE NOT AGGREGATED FOR THE PURPOSES OF DETERMINING CREDIT ALLOWANCES.

**2. Performance Objectives SLA**

Comcast Intrastate Ethernet Transport Services are available both within and between major metropolitan areas throughout the United States. The performance objectives associated with traffic flows between any two Customer Service Locations are dependent upon the locations of the respective sites, designated as Service Location A and Service Location Z on the applicable Sales Order.

*Access Types*

- 1. On-Net Access.** If On-Net Service Location A and On-Net Service Location Z reside within the same Market, Performance Tier 1 objectives will apply. If the On-Net Service Locations are in different Markets, a different Performance Tier will apply. The applicable Performance Tier will appear on/with the respective Sales Order.
- 2. Off-Net Access.** In addition to On-Net Access, Comcast enables Off-Net Access to Ethernet Transport Services via multiple third party providers. The Performance Tier for Off-Net Service is based upon the location of the Off-Net Service Location, the location of the Network to Network Interface (NNI) between Comcast and the third party provider and the performance commitment from the third party provider. The applicable Performance Tier will appear on the respective Sales Order.

**Performance Tiers and Performance Objectives**

Comcast collects continuous in-band performance measurements for its Ethernet Transport Services. The calculation of all Latency, Jitter and Packet Loss Performance Metrics for each calendar month for purposes of this Performance Objectives SLA are based upon the average of sample one-way measurements taken by Comcast during the applicable calendar month, excluding any period during which there is a Service Interruption. The below charts indicate the Performance Standard that should be achieved for each of the Performance Metrics over each calendar month based on the applicable Performance Tier and Class of Service.

**1. Performance Tier 1 (PT1) Agreements – Within Market**

| Performance Metric               | Class of Service (CoS) |          |         |
|----------------------------------|------------------------|----------|---------|
|                                  | Basic                  | Priority | Premium |
| Latency (One-Way Network Delay)  | 45ms                   | 23ms     | 12ms    |
| Jitter (Network Delay Variation) | 20ms                   | 10ms     | 2ms     |
| Packet Loss                      | <1%                    | <0.01%   | <0.001% |

**2. Performance Tier 2 (PT2) Agreements**

| Performance Metric               | Class of Service (CoS) |          |         |
|----------------------------------|------------------------|----------|---------|
|                                  | Basic                  | Priority | Premium |
| Latency (One-Way Network Delay)  | 80ms                   | 45ms     | 23ms    |
| Jitter (Network Delay Variation) | 25ms                   | 15ms     | 5ms     |
| Packet Loss                      | <1%                    | <.02%    | <.01%   |

**3. Performance Tier 3 (PT3) Agreements**

| Performance Metric               | Class of Service (CoS) |          |         |
|----------------------------------|------------------------|----------|---------|
|                                  | Basic                  | Priority | Premium |
| Latency (One-Way Network Delay)  | 100ms                  | 80ms     | 45ms    |
| Jitter (Network Delay Variation) | 30ms                   | 20ms     | 10ms    |
| Packet Loss                      | <1%                    | <.04%    | <.02%   |

**4. Performance Tier 4 (PT4) Agreements**

| Performance Metric               | Class of Service (CoS) |          |         |
|----------------------------------|------------------------|----------|---------|
|                                  | Basic                  | Priority | Premium |
| Latency (One-Way Network Delay)  | 120ms                  | 100ms    | 80ms    |
| Jitter (Network Delay Variation) | 35ms                   | 25ms     | 15ms    |
| Packet Loss                      | <1%                    | <.05%    | <.04%   |

**5. Best Effort Performance Tier (BE)**

No performance commitments will apply. Best Effort Performance Tier will appear on the associated Comcast Sales Order.

**Credit Allowance**

Customer’s sole remedy for Comcast’s failure to achieve the applicable Performance Metric standards above over a given calendar month for the Service are the receipt of the following credit amounts with the stated percentages to be applied against the MRC associated with the impacted portion of the Service set forth in the Sales Order (“**Performance Objective Credits**”).

**TABLE 1: Credit Allowance for Latency Performance Metric**

|                  |          | Performance Tier |           |                  |           |                  |           |                  |           |
|------------------|----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|
|                  |          | PT1              |           | PT2              |           | PT3              |           | PT4              |           |
|                  |          | Measurement (ms) | Credit    |
| Class of Service | Premium  | 0 - 12           | No Credit | 0 - 23           | No Credit | 0 - 45           | No Credit | 0 to 80          | No Credit |
|                  |          | 12.01 - 23       | 10%       | 23.01 - 45       | 10%       | 45.01 - 80       | 10%       | 80.01 - 100      | 10%       |
|                  |          | 23.01 - 45       | 25%       | 45.01 - 80       | 25%       | 80.01 - 100      | 25%       | 100.01 - 120     | 25%       |
|                  |          | >45              | 50%       | >80.01           | 50%       | >100             | 50%       | >120             | 50%       |
|                  | Priority | 0 - 23           | No Credit | 0 - 45           | No Credit | 0 to 80          | No Credit | 0 to 100         | No Credit |
|                  |          | 23.01 - 45       | 10%       | 45.01 - 80       | 10%       | 80.01 - 100      | 10%       | 100.01 - 120     | 10%       |
|                  |          | 45.01 - 80       | 25%       | 80.01 - 100      | 25%       | 100.01 - 120     | 25%       | 120.01 - 150     | 25%       |
|                  |          | >80.01           | 50%       | >100             | 50%       | >120             | 50%       | >150             | 50%       |
|                  | Basic    | 0 - 45           | No Credit | 0 to 80          | No Credit | 0 to 100         | No Credit | 0 to 120         | No Credit |
|                  |          | 45.01 - 80       | 10%       | 80.01 - 100      | 10%       | 100.01 - 120     | 10%       | 120.01 - 150     | 10%       |
|                  |          | 80.01 - 100      | 25%       | 100.01 - 120     | 25%       | 120.01 - 150     | 25%       | 150.01 - 180     | 25%       |
|                  |          | >100             | 50%       | >120             | 50%       | >150             | 50%       | >180             | 50%       |

**TABLE 2: Credit Allowance for Jitter Performance Metric**

|                  |          | Performance Tier |           |                  |           |                  |           |                  |           |
|------------------|----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|
|                  |          | PT1              |           | PT2              |           | PT3              |           | PT4              |           |
|                  |          | Measurement (ms) | Credit    |
| Class of Service | Premium  | 0 - 2            | No Credit | 0 - 5            | No Credit | 0 - 10           | No Credit | 0 - 15           | No Credit |
|                  |          | 2.01 - 3         | 10%       | 5.01 - 10        | 10%       | 10.01 - 15       | 10%       | 15.01 - 20       | 10%       |
|                  |          | 3.01 - 5         | 25%       | 10.01 - 15       | 25%       | 15.01 - 20       | 25%       | 20.01 - 30       | 25%       |
|                  |          | >5               | 50%       | >15              | 50%       | >20              | 50%       | >30              | 50%       |
|                  | Priority | 0 - 10           | No Credit | 0 - 15           | No Credit | 0 - 20           | No Credit | 0 - 25           | No Credit |
|                  |          | 10.01 - 15       | 10%       | 15.01 - 20       | 10%       | 20.01 - 30       | 10%       | 25.01 - 40       | 10%       |
|                  |          | 15.01 - 20       | 25%       | 20.01 - 30       | 25%       | 30.01 - 50       | 25%       | 40.01 - 60       | 25%       |
|                  |          | >20              | 50%       | >30              | 50%       | >50              | 50%       | >60              | 50%       |
|                  | Basic    | 0 - 20           | No Credit | 0 - 25           | No Credit | 0 - 30           | No Credit | 0 - 35           | No Credit |
|                  |          | 20.01 - 30       | 10%       | 25.01 - 40       | 10%       | 30.01 - 50       | 10%       | 35.01 - 60       | 10%       |
|                  |          | 30.01 - 50       | 25%       | 40.01 - 60       | 25%       | 50.01 - 80       | 25%       | 60.01 - 90.01    | 25%       |
|                  |          | >50              | 50%       | >60              | 50%       | >80              | 50%       | >90              | 50%       |

**TABLE 3: Credit Allowance for Packet Loss Performance Metric**

|                  |          | Performance Tier |           |               |           |               |           |               |           |
|------------------|----------|------------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|
|                  |          | PT1              |           | PT2           |           | PT3           |           | PT4           |           |
|                  |          | Measurement      | Credit    | Measurement   | Credit    | Measurement   | Credit    | Measurement   | Credit    |
| Class of Service | Premium  | 0% - 0.001%      | No Credit | 0% - 0.01%    | No Credit | 0% - 0.02%    | No Credit | 0% - 0.04%    | No Credit |
|                  |          | 0.001% - 2.00%   | 10%       | 0.01% - 2.00% | 10%       | 0.02% - 2.00% | 10%       | 0.04% - 2.00% | 10%       |
|                  |          | 2.01% - 4.00%    | 25%       | 2.01% - 4.00% | 25%       | 2.01% - 4.00% | 25%       | 2.01% - 4.00% | 25%       |
|                  |          | >4.00%           | 50%       | >4.00%        | 50%       | >4.00%        | 50%       | >4.00%        | 50%       |
|                  | Priority | 0% - 0.01%       | No Credit | 0% - 0.02%    | No Credit | 0% - 0.04%    | No Credit | 0% - 0.05%    | No Credit |
|                  |          | 0.01% - 2.00%    | 10%       | 0.02% - 2.00% | 10%       | 0.04% - 2.00% | 10%       | 0.05% - 2.00% | 10%       |
|                  |          | 2.01% - 4.00%    | 25%       | 2.01% - 4.00% | 25%       | 2.01% - 4.00% | 25%       | 2.01% - 4.00% | 25%       |
|                  |          | >4.00%           | 50%       | >4.00%        | 50%       | >4.00%        | 50%       | >4.00%        | 50%       |
|                  | Basic    | 0% - 1.00%       | No Credit | 0% - 1.00%    | No Credit | 0% - 1%       | No Credit | 0% - 1%       | No Credit |
|                  |          | 1.01% - 2.00%    | 10%       | 1.01% - 2.00% | 10%       | 1.01% - 2.00% | 10%       | 1.01% - 2.00% | 10%       |
|                  |          | 2.01% - 4.00%    | 25%       | 2.01% - 4.00% | 25%       | 2.01% - 4.00% | 25%       | 2.01% - 4.00% | 25%       |
|                  |          | >4.00%           | 50%       | >4.00%        | 50%       | >4.00%        | 50%       | >4.00%        | 50%       |

Customer shall only be entitled to receive a Performance Objective Credit for one Performance Metric failure per affected portion of the Service per calendar month. For example, if the applicable metric for Jitter and Latency were missed for the same transport connection (Service Location A to Service Location Z) in a given calendar month, Customer will only be entitled to the Performance Objective Credit associated with either the Jitter or Latency failure for such portion of the Service. To qualify for a Performance Objective Credit, Customer must request the applicable Performance Objective Credit from Comcast within thirty (30) days of the end of the applicable calendar month in which the applicable Performance Metric standard was not achieved. Comcast shall not incur any liability, including Performance Objective Credit, for any failure of the Services caused by force majeure events, Planned Service Interruptions, Customer actions, omissions or equipment, CPE or any other items set forth in the "Exceptions to Credit Allowances" section below.

### **C. Exceptions and Terms applicable to all SLAs**

#### **1. Emergency Blocking**

The Parties agree that if either Party hereto, in its reasonable sole discretion, determines that an emergency action is necessary to protect its own network, the Party may, after engaging in reasonable and good faith efforts to notify the other Party of the need to block, block any transmission path over its network by the other Party where transmissions do not meet material standard industry requirements. The Parties further agree that none of their respective obligations to one another under the Agreement will be affected by any such blockage except that the Party affected by such blockage will be relieved of all obligations to make payments for charges relating to the circuit(s) which is so blocked and that no Party will have any obligation to the other Party for any claim, judgment or liability resulting from such blockage.

#### **2. Remedy Processes**

All claims and rights arising under this Service Level Agreement must be exercised by Customer in writing within the time period set forth in Sections B.1 and B.2, as applicable. The Customer must submit the following information to the Customer's Comcast account representative with any and all claims for credit allowances: (a) Organization name; (b) Customer account number; and (c) basis of credit allowance claim (including date and time, if applicable). Comcast will acknowledge and review all claims promptly and will inform the Customer by electronic mail or other correspondence whether a credit allowance will be issued or the claim rejected, with the reasons specified for the rejection.

#### **3. Exceptions to Credit Allowances**

Comcast's failure to meet the either of the SLAs set forth on this Schedule A-2 shall not qualify for the remedies set forth herein if such failure is related to, associated with, or caused by: Planned Service Interruptions or other scheduled maintenance events; Customer actions or inactions; Customer-provided power or equipment; any third party not contracted through Comcast, including, without limitation, Customer's users, third-party network providers, any power, equipment or services provided by third parties; or an event of force majeure as defined in the Agreement.

#### **4. Other Limitations**

THE TOTAL CREDIT ALLOWANCES PER CALENDAR MONTH UNDER THIS SCHEDULE A-2 IS CAPPED AT 50% OF THAT MONTH'S MRC FOR THE IMPACTED PORTIONS OF SERVICE. In addition, the remedies set forth in this Service Level Agreement shall be Customer's sole and exclusive remedies for any Service Interruption, outage, unavailability, delay, or other degradation, or any Comcast failure to meet the service objectives.

Exhibit G

A PURCHASE ORDER (WHEN EXECUTED)

Exhibit H

MASTER CONTRACTOR'S RESPONSE TO A PORFP (WHEN SUBMITTED)

Exhibit I

A PORFP (WHEN RELEASED)

Exhibit J  
State Contract Affidavit, executed by the Master Contractor and dated 08-02- 2019

ATTACHMENT 5 CONTRACT AFFIDAVIT

21.07.01.25

A. AUTHORITY

I HEREBY AFFIRM THAT:

I, Daniel J. Carr (print name), possess the legal authority to make this Affidavit.

B. CERTIFICATION OF REGISTRATION OR QUALIFICATION WITH THE STATE  
DEPARTMENT OF ASSESSMENTS AND TAXATION

I FURTHER AFFIRM THAT: Comcast Business Communications, LLC

The business named above is a (check applicable box):

- (1) Corporation —  domestic or  foreign;
- (2) Limited Liability Company —  domestic or  foreign;
- (3) Partnership —  domestic or  foreign;
- (4) Statutory Trust —  domestic or  foreign;
- (5)  Sole Proprietorship.

and is registered or qualified as required under Maryland Law. I further affirm that the above business is in good standing both in Maryland and (IF APPLICABLE) in the jurisdiction where it is presently organized, and has filed all of its annual reports, together with filing fees, with the Maryland State Department of Assessments and Taxation. The name and address of its resident agent (IF APPLICABLE) filed with the State Department of Assessments and Taxation is:

Name and Department ID Number: The Corporation Trust Incorporated

Address: 2405 York Rd, Lutherville-Timonium, MD 21093

and that if it does business under a trade name, it has filed a certificate with the State Department of Assessments and Taxation that correctly identifies that true name and address of the principal or owner as:

Name and Department ID Number: Not Applicable

Address: \_\_\_\_\_

C. FINANCIAL DISCLOSURE AFFIRMATION

I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, the provisions of State Finance and Procurement Article, §13-221, Annotated Code of Maryland, which require that every business that enters into contracts, leases, or other agreements with the State of Maryland or its agencies during a

calendar year under which the business is to receive in the aggregate \$100,000 or more shall, within 30 days of the time when the aggregate value of the contracts, leases, or other agreements reaches \$100,000, file with the Secretary of State of Maryland certain specified information to include disclosure of beneficial ownership of the business.

#### D. POLITICAL CONTRIBUTION DISCLOSURE AFFIRMATION

##### I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, Election Law Article, §§14-101 — 14-108, Annotated Code of Maryland, which requires that every person that enters into contracts, leases, or other agreements with the State of Maryland, including its agencies or a political subdivision of the State, during a calendar year in which the person receives in the aggregate \$100,000 or more shall file with the State Board of Elections a statement disclosing contributions in excess of \$500 made during the reporting period to a candidate for elective office in any primary or general election.

#### E. DRUG AND ALCOHOL FREE WORKPLACE

(Applicable to all contracts unless the contract is for a law enforcement agency and the agency head or the agency head's designee has determined that application of COMAR 21.11.08 and this certification would be inappropriate in connection with the law enforcement agency's undercover operations.)

##### I CERTIFY THAT:

- (1) Terms defined in COMAR 21.11.08 shall have the same meanings when used in this certification.
- (2) By submission of its bid or offer, the business, if other than an individual, certifies and agrees that, with respect to its employees to be employed under a contract resulting from this solicitation, the business shall:
  - (a) Maintain a workplace free of drug and alcohol abuse during the term of the contract;
  - (b) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of drugs, and the abuse of drugs or alcohol is prohibited in the business' workplace and specifying the actions that will be taken against employees for violation of these prohibitions;
  - (c) Prohibit its employees from working under the influence of drugs or alcohol;
  - (d) Not hire or assign to work on the contract anyone who the business knows, or in the exercise of due diligence should know, currently abuses drugs or alcohol and is not actively engaged in a bona fide drug or alcohol abuse assistance or rehabilitation program;
  - (e) Promptly inform the appropriate law enforcement agency of every drug-related crime that occurs in its workplace if the business has observed the violation or otherwise has reliable information that a violation has occurred;
  - (f) Establish drug and alcohol abuse awareness programs to inform its employees about:
    - (i) The dangers of drug and alcohol abuse in the workplace;

**Data Telecom Services Expansion Window**  
**Solicitation #: 060B840065**

**RFP Document**

- (ii) The business's policy of maintaining a drug and alcohol free workplace;
  - (iii) Any available drug and alcohol counseling, rehabilitation, and employee assistance programs; and
  - (iv) The penalties that may be imposed upon employees who abuse drugs and alcohol in the workplace;
- (g) Provide all employees engaged in the performance of the contract with a copy of the statement required by §E(2)(b), above;
- (h) Notify its employees in the statement required by §E(2)(b), above, that as a condition of continued employment on the contract, the employee shall:
- (i) Abide by the terms of the statement; and
  - (ii) Notify the employer of any criminal drug or alcohol abuse conviction for an offense occurring in the workplace not later than 5 days after a conviction;
- (i) Notify the procurement officer within 10 days after receiving notice under §E(2)(h)(ii), above, or otherwise receiving actual notice of a conviction;
- (j) Within 30 days after receiving notice under §E(2)(h)(ii), above, or otherwise receiving actual notice of a conviction, impose either of the following sanctions or remedial measures on any employee who is convicted of a drug or alcohol abuse offense occurring in the workplace:
- (i) Take appropriate personnel action against an employee, up to and including termination; or
  - (ii) Require an employee to satisfactorily participate in a bona fide drug or alcohol abuse assistance or rehabilitation program; and
- (k) Make a good faith effort to maintain a drug and alcohol free workplace through implementation of §E(2)(a)—(j), above.
- (3) If the business is an individual, the individual shall certify and agree as set forth in §E(4), below, that the individual shall not engage in the unlawful manufacture, distribution, dispensing, possession, or use of drugs or the abuse of drugs or alcohol in the performance of the contract.
- (4) I acknowledge and agree that:
- (a) The award of the contract is conditional upon compliance with COMAR 21.11.08 and this certification;
  - (b) The violation of the provisions of COMAR 21.11.08 or this certification shall be cause to suspend payments under, or terminate the contract for default under COMAR 21.07.01.11 or 21.07.03.15, as applicable; and
  - (c) The violation of the provisions of COMAR 21.11.08 or this certification in connection with the contract may, in the exercise of the discretion of the Board of Public Works, result in suspension and debarment of the business under COMAR 21.08.03.

**F. CERTAIN AFFIRMATIONS VALID**

**Data Telecom Services Expansion Window  
Solicitation #: 060B8400065**

**RFP Document**

I FURTHER AFFIRM THAT:

To the best of my knowledge, information, and belief, each of the affirmations, certifications, or acknowledgements contained in that certain Bid/Proposal Affidavit dated May 9, 20 18, and executed by me for the purpose of obtaining the contract to which this Exhibit is attached remains true and correct in all respects as if made as of the date of this Contract Affidavit and as if fully set forth herein.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date: August 02, 2019

By: Daniel J. Carr, Vice President (printed name of Authorized Representative and Affiant)

DocuSigned by:  
*Daniel J. Carr* (signature of Authorized Representative and Affiant)  
8EBFD127E5604F8...

Effective August 8, 2011

Exhibit K

TECHNICAL PROPOSAL

*See attachment entitled "Exhibit K – Technical Proposal"*

# NETWORK SERVICE PROPOSAL

State of Maryland

**Technical Proposal Volume 1**

Data Telecommunications Services –  
Expansion Window #1, RFP #F50B4400028  
May 10<sup>th</sup> 2018

John Stinebaugh

Strategic Enterprise Account Executive

8031 Corporate Dr.

Baltimore, Maryland 21236

410-513-0472

[john\\_stinebaugh@comcast.com](mailto:john_stinebaugh@comcast.com)



**COMCAST  
BUSINESS**

OUTMANEUVER

# COMCAST BUSINESS

## 3.3.1 Transmittal Letter

May 10<sup>th</sup>, 2018

Dapheny McCray  
State of Maryland  
100 Community Place  
Crownsville, MD 21032

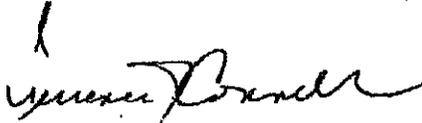
Dear Dapheny McCray,

Comcast Business Communications, LLC ("Comcast") looks forward to a mutually rewarding business relationship with State of Maryland and its representatives. Comcast is pleased to provide this proposal (the "proposal") to State of Maryland ("State of Maryland") for managed network services in response to the request for proposal; Data Telecommunications Services – Expansion Window #1, RFP #F50B4400028 dated March 30<sup>th</sup>, 2018 for State of Maryland.

As you proceed in the selection process, please feel free to contact your Strategic Enterprise Account Executive, John Stinebaugh, at 410-513-0472, with any questions, comments, or concerns.

No statement made in the proposal shall be considered a contractual term unless expressly included in the aforementioned Enterprise Services Master Services Agreement or as agreed upon by the parties as a result of contract negotiations. Comcast, as part of the post bid submission process, would be amenable to negotiating limited modifications to the Enterprise Services Master Services Agreement appended to the attached proposal, to address additional items (if any) that your organization feels are critical to its consideration and use of the Comcast solution.

Sincerely,  
Comcast Business Communications, LLC



Terrence J. Connell  
Senior Vice President  
FIN# 23-1709202

# COMCAST BUSINESS

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Comcast Business Communications, LLC, a Pennsylvania limited liability company, on behalf of itself and its applicable operating affiliates and subsidiaries (including, but not limited to, Comcast Cable Communications Management, LLC); together offering services throughout this Network Service Proposal identified as "Comcast".

# COMCAST BUSINESS

## 3.3.2.1 Executive Summary

In the ever-changing world of communications, Comcast redefines how high bandwidth products and services are delivered. We bring scalability, reliability, resiliency, and leading edge solutions directly to your organization. Comcast can meet your organization's communications needs quickly, efficiently, and professionally with business class service and support. Comcast is well positioned to offer long-term value to support future technology strategies. Our integrated Internet and data products are delivered over an extensive and deep advanced network that is physically diverse from the phone companies.

Comcast proposes, specifically, to provide a managed and scalable Wide Area Network and scalable Internet Access that will seamlessly link each individual site listed in the RFP. Your organization will be able to exchange data at speeds up to 1000 Mbps from each site.

Comcast's proposal offers a flexible solution that is capable of meeting your demands. Other Comcast advantages include:

### Performance

- Major performance improvements and managed costs as compared to legacy WAN technologies like T1, Frame Relay, ATM, and private lines

### Resilient, robust enhanced network to support your operations.

- High network availability, minimal latency and low packet loss
- Self-healing, redundant core network architecture
- A network covering 150,000 fiber route miles

### Highly reliable and scalable Ethernet data and Internet services tailored to meet your needs.

- Manageable services that grow with your business
- Bandwidth in flexible increments from 1Mbps to 10Gbps

### Our Comcast Business Promise

- Dedicated Project Managers
- Proactive Monitoring to the Customer Premise
- 24x7 Dedicated Enterprise Support

Comcast is pleased to submit this proposal for advanced, efficient and affordable high-bandwidth digital communications services and looks forward to developing a solid business relationship with you and to assisting your organization in addressing its communication needs. Comcast is confident that the solutions presented in this proposal will provide a cost-effective solution that supports business objectives and quality requirements and will enhance your overall communication services portfolio.

This proposal is valid for 180 days.

# COMCAST BUSINESS

## Comcast Exceptions

| Title          | Page/Section   | Category  | Exception   |
|----------------|--|---|---|
| All Provisions | All Pages  | All Provisions (including, but not limited, 2.9.9 and 2.23)     | Comcast is not able to agree to Liquidated Damages. Comcast provides SLA credits for service related issues and is willing to discuss the conditions surrounding those.   |
| RFP Document   | Pg. 5; Sec 1.5.1- Most Favored Customer                                      | Most Favored Customer   | Comcast takes exception to this provision at this time and reserves the right to negotiate. Comcast is committed to providing reasonable pricing for our services. Comcast remains open to good faith negotiations with the rates offered in our RFP response serving as a starting point. Comcast is amenable to including a rate review process.  |
| RFP Document   | Pg. 10; Sec 1.23- Mandatory Contractual Terms                                | Response to RFP equals acceptance of all RFP Terms.             | Comcast agrees to the Mandatory Contractual Terms except as detailed in this response.  |
| RFP Document   | Pg. 23; Sec 2.9.8- Installation Due Date                                     | Installation/termination due date                               | Comcast agrees to make commercially reasonable efforts to install and provision Services by the installation/termination due date stated in the Master Contractor's e-mail. However, Comcast makes no representations regarding its ability to install and provision the Services by said date due to conditions out of its control, including obtaining of permits, force majeure events, and any actions required by, or attributable to, the Customer.   |
| RFP Document   | Pg. 26; Sec 2.10- Procedure for adding a service offering, tax or surcharge. | Taxes and surcharges  | Comcast takes exception to this provision at this time. Taxes and surcharges are subject to change without notice.  |
| RFP Document   | Pg. 30-32; Sec 2.13 [All Sub-sections]- Insurance                            | Insurance   | Comcast accepts the insurance requirements in Section 2.13 subject to the changes indicated on Attachment A hereto.   |
| RFP Document   | Pg. 32-33; Sec 2.14.3 and 2.14.10 Transition-In and Transition Out           | Pre-Project Starting Duties and Post-Project Completion Duties. | Comcast agrees to the "Transition-In" and "Transition-Out" concepts. However, Comcast does take exception to the 90-day transition-in period (2.14.10) as delays could arise because of reasons outside of Comcast's control. Comcast will commit to using commercially reasonable efforts to complete the transition-in period within the 90-day period. Comcast will cooperate with a successor provider during a transition-out period (2.14.10) but reserves the right to negotiate standard scope limitations on such assistance (e.g. no obligation to disclose Comcast confidential information) |

# COMCAST BUSINESS

|              |  |   |   |
|--------------|--|---|---|
| RFP Document | Pg. 33-35; Sec 2.15<br>[All Sub-sections]<br>Security Requirements                   | Security Requirements   | Comcast takes exception to this section and reserves the right to negotiate, pending review by Comcast Security Team and providing the State has the flexibility to do so. Comcast follows an internal Security Policy regarding background checks, data security, and additional areas as detailed in the above referenced provision. In the event Comcast is the successful bidder, Comcast personnel responsible for these functional areas will be available to discuss any concerns directly with the State. |
| RFP Document | Pg. 36; Sec 2.16<br>Disaster Recovery  | Disaster Recovery   | Comcast has created and implemented a Disaster Recovery Plan which we expect to be satisfactory to the State. In the event Comcast is the successful bidder, Comcast personnel responsible for this functional area will be available to discuss any concerns directly with the State.  |
| RFP Document | Pg. 39-40; Section 2.21.7<br>Billing Errors  | Billing Errors  | Comcast agrees to resolve invoicing issues. We would like to discuss the requirement in Section 2.21.7 in greater detail as we are not unsure if we understand the mechanics of the remedy.   |
| RFP Document | Pg. 51; Attachment 1-<br>Price Proposal Form   | Billing Responsibility to list Taxes, tariffs and other surcharges on pricing sheets. | As point of clarification, customer will be responsible for all construction/installation charges, taxes, fees, and charges applicable to the Service.  |
| RFP Document | Pg. 54-69; Attachment 2:<br>Sample Contract  | Sample Contract   | Comcast will need to incorporate terms from its general terms and conditions and applicable product-specific attachments which are specific to the services that will be provided and which are not addressed in the Sample Contract.   |
| RFP Document | Pg. 55; Attachment 2-<br>Contract § 2.2: Statement of Work                           | Precedence of Attachments/Exhibits  | Comcast takes exception to this provision at this time, and reserves the right to negotiate the order of precedence of the exhibits.  |
| RFP Document | Pg. 57; Attachment 2-<br>Contract § 5: PORFPs.                                       | Negotiation of terms in addition to the terms specified herein.                       | Comcast takes exception to this provision at this time and reserves the right to negotiate future terms such as those specified in PORFPs including, but not limited to warranties, deliverables and acceptance test requirements.  |
| RFP Document | Pg. 57; Attachment 2-<br>Contract § 6.3: Patents, Copyrights, Intellectual Property. | Indemnification   | Comcast takes exception to this provision at this time and reserves the right to negotiate. Comcast will agree to indemnify claims subject to terms negotiated by both parties and as required by applicable law.   |
| RFP Document | Pg. 62; Attachment 2-<br>Contract § 21: Financial Disclosure                         | Financial Disclosure  | To the extent applicable, Comcast will comply with disclosure required by Section 13-221 of the Maryland Code. Will such disclosures be required given that Comcast is a publically traded company?   |

# COMCAST BUSINESS

|              |  |                               |   |
|--------------|--|-------------------------------|---|
| RFP Document | Pg. 62; Attachment 2- Contract § 23; Retention of Records                | Retention of Records          | Comcast takes exception to this provision at this time. Comcast reserves the right to negotiate record retention requirements, subject, in all events, to compliance with all applicable Federal, State, and Local laws and ordinances.   |
| RFP Document | Pg. 63-64; Attachment 2- Contract § 27-28: Indemnification and Liability | Indemnification and Liability | Comcast takes exception to this provision at this time and reserves the right to negotiate. Comcast will provide indemnification and limited liability in line with Comcast's General Terms, however we are open to negotiating terms agreed to by both parties.  |
| RFP Document | Pg. 66; Attachment 2- Contract § 32(b): Commercial Nondiscrimination     | Commercial Nondiscrimination  | Comcast takes exception to this provision at this time and reserves the right to negotiate. Comcast includes contract terms requiring all subcontractors to comply with all applicable Federal, State, and Local laws and ordinances, including but not limited to non-discrimination.                        |
| RFP Document | Pg. 66; Attachment 2- Contract § 32(c): Commercial Nondiscrimination     | Commercial Nondiscrimination  | Subject, in all events, to Comcast's agreement to comply with all applicable Federal, State, and Local laws and ordinances, Comcast takes exception to this section and reserves the right to negotiate, pending review by counsel, business leadership and providing the State has the flexibility to do so. |
| RFP Document | Pg. 66; Attachment 2- Contract § 6.1-6.2, 6.5, 7.1, 31 and 34:           | Various Sections              | Comcast does not believe that the referenced sections are applicable to the services to be provided and, as such, they should be removed from the agreement. Comcast is willing to discuss the inclusion of these provision should the State disagree with our assessment.                                    |

# COMCAST BUSINESS

## 3.3.2.2 Offeror General Information

### Company Overview

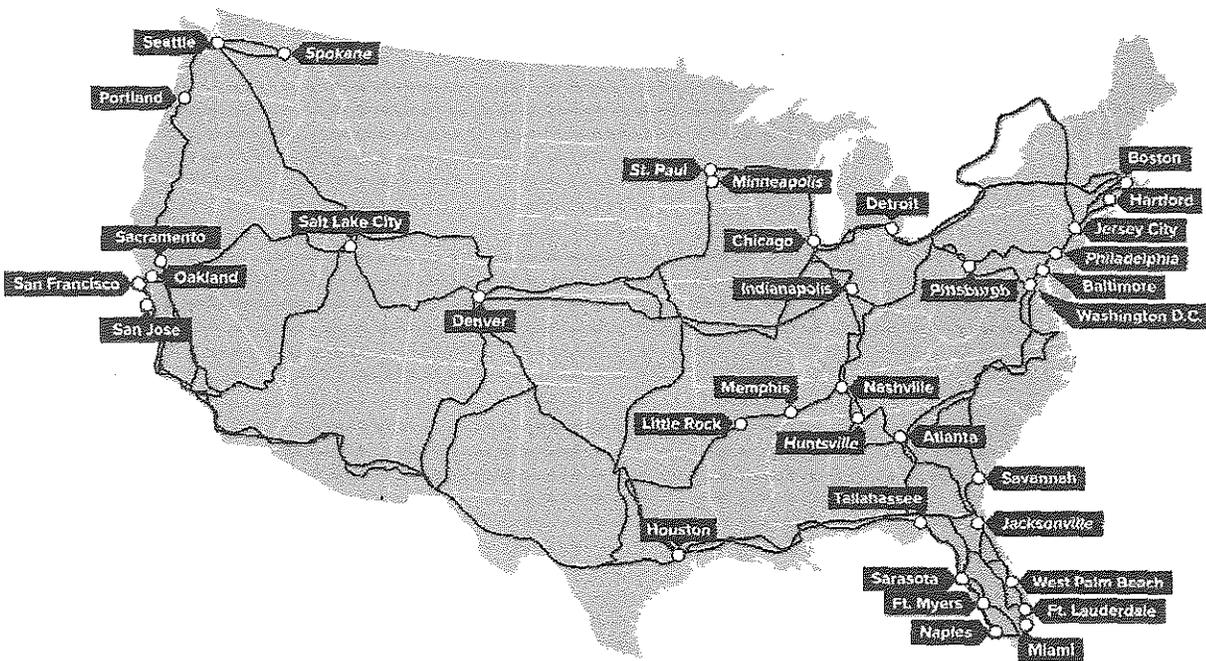
Comcast was founded in 1963 as a single-system cable operator and is now the nation's largest with over \$84 billion in revenue in 2017. We are one of the nation's leading providers of information, communications and entertainment products and services with over 24.7 million Internet customers, 11.7 million voice customers, 22.5 million video customers and hundreds of thousands of business customers.

With over 164,000 employees, we currently serve 20 of the top Metropolitan Statistical Areas (MSAs) in the US and provide service to customers in 39 states and the District of Columbia.

Our high-speed, high-capacity broadband and Ethernet services operate across our private, diverse enhanced network. With over 150,000 national route miles of fiber, **our network is the largest facilities-based last mile alternative to the phone company.**

With the first and largest fully 40G backbone, and the deployment of the first 100G router interface, Comcast's advanced network delivers reliable and scalable services for businesses of any size.

### Diverse Network with National Reach



|   |   |   |                                     |   |                        |   |                             |
|---|---|---|-------------------------------------|---|------------------------|---|-----------------------------|
|  | Over 2 Million Ethernet enabled buildings |  | Capacity that scales up to 100 Gbps |  | 150k fiber route miles |  | 600+ connected data centers |
|---|---|---|-------------------------------------|---|------------------------|---|-----------------------------|

Comcast Business Communications, LLC is a subsidiary of Comcast Corporation, owner of the largest cable communications company in the United States and headquartered in Philadelphia. Building upon Comcast's and its subsidiaries' reputation as pioneers in developing innovative communications products and services for consumers, Comcast is bringing innovative technology and service capabilities to businesses, government, and educational organizations within Comcast Cable markets.

# COMCAST BUSINESS

Comcast Business Communications leverages and augments Comcast's network with next-generation optical and access technologies to offer Internet and other data services directly to customers. An extensive network, delivering unmatched broadband capacity, and a commitment to customer service, enables Comcast to deliver superior broadband services to a range of all businesses and organizations — small, medium, and large.

Consistent with Comcast's business strategy to deliver unprecedented bandwidth, network reach, and a superior customer experience, Comcast has invested in advanced network technologies, business and operating support systems, as well as network professionals. These investments have resulted in scalable services, and superior service levels for those businesses and organizations served in the Comcast markets. In addition, the extensive footprint of the network allows Comcast to deliver coaxial and fiber capacity to many business locations that have been historically underserved by other network providers.

Among the services that Comcast and its affiliates provide are several that they have helped pioneer, including high-speed commercial cable-modem-based Internet services.

For more information on Comcast visit <http://www.business.comcast.com>.

## Financial Qualifications

Comcast is a wholly owned, indirect subsidiary of Comcast Corporation, from which Comcast receives its funding. As such, Comcast does not release stand-alone financial results for Comcast Business or associated financial information. Please refer to the publicly filed external consolidated Comcast financial statements and earnings press releases posted at the Comcast Corporate web page: <http://www.cmcsk.com>.

## Supplier Diversity Program

Diversity in our supply base is integral to our continued success. Our Supplier Diversity Program is designed to promote, increase and improve the participation of diverse businesses within our supply chain. It provides Comcast purchasers with reliable resources, creates jobs, strengthens our purchasing power and builds value for our shareholders.

Comcast NBCUniversal spent \$11 billion with diverse suppliers since 2010, including more than \$3.2 billion in 2016 with diverse Tier I suppliers. In addition, Comcast NBCUniversal was inducted into the Billion Dollar Roundtable, and we are the first media and technology company to join this prestigious list. We aim to provide equal access and opportunity to all suppliers, and to facilitate nondiscriminatory business relationships with diverse firms.

We also have a Tier II (subcontracting) program for vendors that may not be able to work directly as primary suppliers. We partner with non-diverse prime contractors and strongly encourage joint ventures, partnerships, and subcontracting as methods to create additional business opportunities for diverse vendors. In 2016, Comcast and NBCUniversal spent \$455 million with Tier II diverse subcontractors.

Active partnerships with organizations that support the inclusion of all vendors is a key success factor for our Supplier Diversity Program. Comcast is proud to support and collaborate with partner organizations to increase economic capacity for organizations and owners representing diverse communities. Comcast and NBCUniversal partner with supplier diversity organizations throughout the country. Our partners include:

- National Minority Supplier Development Council (NMSDC)
- Women's Business Enterprise National Council (WBENC)
- National Veteran-Owned Business Association (NaVOBA)
- U.S. Hispanic Chamber of Commerce (USHCC)
- U.S. Pan Asian American Chamber of Commerce (USPAACC)
- The National Center for American Indian Enterprise Development (NCAIED)
- National Black Chamber of Commerce (NBCC)
- National Gay and Lesbian Chamber of Commerce (NGLCC)
- Walter Kaitz Foundation

# COMCAST BUSINESS

We are honored by the recognition our Supplier Diversity Program received in 2016 and 2017:

- For the third consecutive year, Comcast NBCUniversal earned a place among Black Enterprise's 2017 "Top 50 Companies for Supplier Diversity."
- Comcast NBCUniversal received the 2017 USBLN Leadership Award as "Top Corporation for Disability-Owned Businesses."
- Comcast NBCUniversal was recognized among *Affinity Inc* magazine's AIM 100 for the company's demonstrated leadership and commitment to LGBT inclusion.
- Comcast NBCUniversal earned recognition from the National Minority Supplier Development Council as 2016 Corporation of the Year for Innovation.
- The United States Hispanic Chamber of Commerce (USHCC) selected Comcast NBCUniversal as their 2016 Corporation of the Year.
- The Minority Business News USA team recognized Comcast NBCUniversal among the 2016 Corporate 101: America's Most Admired Corporations for Supplier Diversity.
- Comcast NBCUniversal was selected as a 2016 Military Friendly Supplier Diversity program by the National Veteran Owned Businesses Association (NaVOBA).
- Comcast NBCUniversal was named one of *Women's Enterprise USA* magazine's WE 100 Corporations of the Year.
- DiversityInc ranked Comcast NBCUniversal #5 among its 2016 "Best Companies for Supplier Diversity."

Additional information regarding Comcast's Supplier Diversity program is available at:  
<http://corporate.comcast.com/our-values/diversity-inclusion/supplier-diversity>

## Industry Awards



Over the years, Comcast Business has been the recipient of several Metro Ethernet Forum (MEF) awards. These awards recognize excellence and innovation in the emerging Third Network community. In 2017, Comcast Business received the MEF Enterprise Application of the Year in the Health and the Sports & Enterprise categories. These awards recognize the most innovative use of Carrier Ethernet (CE) services to meet the requirements of health and sports & entertainment related applications. Comcast Business is the first carrier in the world to be



MEF CE 2.0 certified, leading the industry and demonstrating our commitment to enterprises.

## Business Continuity

Comcast maintains an active business continuity management program that consists of business resumption, disaster recovery and incident management planning. This program has an executive management oversight function to monitor the consistent implementation of programs across the Company in order to fulfill Comcast's mission, which is:

*"Assure the continuation of mission critical business operations and services; and minimize damage to our customers, employees and the brand following significant business disruptions".*

Comcast has developed a Business Continuity Program Statement and Policy that are consistent with industry-wide best practices, which defines a strategy, methodology and responsibilities for implementing business continuity initiatives and communicating the importance of business continuity management within the company. The Business Continuity methodology consists of Risk Identification and Assessment, Risk Optimization Strategies, Incident Management Planning and Reporting.

Comcast's Business Continuity Management programs consist of both proactive and reactive solutions depending on the operational and financial significance, duration, and the potential damage of the risks to the Comcast Brand. The ability to account for all types of risks is not practical, so it is important that incident management processes be scalable for managing the incident and communicating information.

# COMCAST BUSINESS

Comcast conducts exercises annually, at a minimum, to evaluate plans and train people. Information related to these exercises is proprietary to Comcast.

Comcast's Technology and Product Security team tests its operational and organizational plans, systems and teams for operational readiness. These plans have been successfully executed in a number of natural and man-made disasters. The plan helps ensure the emergency delegation of authority, and adoption alternative work schedules and locations until normal operations can be resumed. Appropriate precautions and work practices minimize the risk of potential employee exposure to emergency situations.

A critical element in network survivability is the team that monitors and manages the network. Comcast's network team consists of experienced technology professionals specializing in Engineering, Planning, Operations, and Information Technologies to protect the health of the Comcast network.

The design and redundancy in Comcast's network as well as experienced teams that manage the network are instrumental in managing these emergency situations. Comcast monitors, analyzes, and manages its network 24x7x365. There are East and West National Network Operations Centers (NXOCs) and redundancy is built into the network and the related operational support systems.

## General Information

|                                       |   |             |
|---------------------------------------|---|-------------|
| <b>Legal Name of Business</b>         | Comcast Business Communications, LLC (CBC)  |             |
| <b>Ownership Structure</b>            | Limited Liability Corporation and Wholly-owned subsidiary of Comcast Corporation  |             |
| <b>Years in Business</b>              | CBC began offering services to small businesses in 2006.  |             |
| <b>Corporate Officers</b>             | Terrence J. Connell, Senior Vice President<br>Daniel J. Carr, Vice President<br>Michael D. Maloney, Vice President  |             |
| <b>Accounting &amp; Disbursements</b> | Michael Salvia, Vice President, Finance   |             |
| <b>FEIN</b>                           | 23-1709202 (Comcast Cable Communications Management, LLC)   |             |
| <b>Bank Reference</b>                 | Wells Fargo<br>101 North Independence Mall East<br>Philadelphia, PA 19106<br><br>JP Morgan Chase Bank, N.A.<br>14800 Frye Road<br>Fort Worth, TX 76155-2732   |             |
| <b>Supplier Reference</b>             | Cisco<br>9850 Double R Boulevard<br>Park Center East<br>Reno, NV 89521<br>Rajshi Sidher, Credit Manager<br>rsidher@cisco.com<br><br>General Instrument Corporation<br>dba Motorola Mobility, Inc.<br>Broadband Communications Sector<br>Communications Enterprise<br>101 Tournament Drive<br>Horsham, PA 19044<br>Susan Bernard, Mgr. Accounts Receivable<br>(215) 323-1288 |             |
| <b>Dunn and Bradstreet Number</b>     | Comcast Business Corporation  | 05-715-6663 |
|                                       | Comcast Cable Communication Division  | 78-767-2310 |
|                                       | Comcast Business Communications, LLC  | 96-818-5491 |

# COMCAST BUSINESS

## 3.3.2.3 Past Performances

### Cast Study

#### **Regional Education Collaborative Provides Education and Technology Resources to Member School Districts**

The Middlesex Regional Educational Services Commission (MRESC) is a state-chartered organization that provides cooperative, cost efficient education, transportation and business services to 800 K-12 New Jersey Schools and numerous government agencies.

Students and teachers take advantage of MRESC services, which include non-public school services, business services, instructional services, special education, professional development, management services, and technology services.

#### **Scalable Internet Is Critical to Support BYOD Initiatives and Online Assessment**

As a large educational consortium backed by the New Jersey Department of Education, MRESC is plugged into the collective demands of its member school districts—many of which were in desperate need of more bandwidth to support 1:1 device initiatives, online assessments, online learning and collaboration, and, of course, more pervasive WIFI coverage to support the increasing number of mobile devices and tablets students and teachers were bringing to school each day.

To help member districts acquire scalable, high-capacity connectivity, MRESC sought to broker a deal with local Ethernet service providers so that member districts could leverage federal E-RATE funds (otherwise known as Schools and Libraries Program of the Universal Service Fund). With the help of Dellicker Strategies, a consulting firm that specializes in the areas of blended learning and the telecommunications purchasing process, the MRESC embarked on an expansive project to upgrade and future-proof the network infrastructure for more than 100 K-12 schools across New Jersey.

"In the past, our member schools had to seek funding for Internet services through E-RATE directly, and that is a very cumbersome process. With the consortium, MRESC submitted a single request on behalf of all K-12 schools in New Jersey. When individual schools were ready to select and apply for funding, it was much less time consuming," said Patrick Moran, business administrator and board secretary for the MRESC.

#### **SITUATION**

- New Jersey education collaborative provides technology and learning resources to students and teachers in 800 K-12 schools across all of New Jersey

#### **CHALLENGE**

- Existing Internet connections cannot cost-effectively scale to support digital education initiatives and technology needs of member school districts

#### **SOLUTION**

- Comcast Business Ethernet Dedicated Internet
- Comcast Business Ethernet Network Service

#### **RESULTS**

- Scalable capacity to support digital learning and online testing
- Access to nationwide fiber network to support future initiatives

#### **Comcast Business Delivers Scalable, High-Performance Ethernet Services to Support Digital Testing and Learning**

After evaluating multiple service providers, MRESC selected Comcast Business to provide Internet services to its member school districts within the Comcast Business footprint. Comcast Business offered a wide breadth of cost-effective services, and its large fiber network gave MRESC the option to connect schools from across the state to each other. Now, more than 75 K-12 schools throughout New Jersey are leveraging Ethernet Dedicated Internet (EDI) lines that provide Internet access for online testing and learning, including providing the backbone for WIFI services to support student and faculty use of mobile devices. Individual schools determine their own bandwidth requirements based on their network capacity needs and budget. The average speed secured through this program is 1 Gigabit per second (Gbps), though schools have opted for speeds ranging from 10 megabits-per-second (Mbps) to 10 Gbps.

# COMCAST BUSINESS

In addition to Ethernet Dedicated Internet services, many school districts are opting to install Ethernet Network Services from Comcast Business to connect their various elementary, middle and high schools to each other. This has improved collaboration and efficiency by allowing school administrators to access student information via a secure network connection.

"Comcast Business has allowed many of our member districts to increase their bandwidth exponentially – and for a great price, in some cases – which has given them access to scalable bandwidth that was previously cost-prohibitive for them," said Moran. "We're seeing members getting 3-4x bandwidth for the same price they were already spending, while gaining the ability to let students collaborate with each other via a secure network."

"As blended learning continues to gain traction in our schools, districts need abundant and affordable Internet services," said Kevin Dellicker, co-founder and chief executive of Dellicker Strategies. "The high-speed Ethernet services that providers like Comcast Business offer to our educational clientele provide the Internet access students need to collaborate better, solve problems more efficiently, and take advantage of the many benefits that digital learning can provide."

---

***"We're seeing members getting 3-4x bandwidth for the same price they were already spending, while gaining the ability to let students collaborate with each other via a secure network."***

– Patrick Moran  
Business Administrator and Board Secretary  
MRESC

---

# COMCAST BUSINESS

## References

### Henrico County Public Schools

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Sandston VA 23150  
Rosario Gamberdella  
Information Security Officer  
rgambardella@henrico.k12.va.us  
804-328-5225

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rlewis@bankofdelmarva.com  
410-430-1056

### Whitney Bailey Cox and Mangani LLC

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### HighPoint Global

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Indianapolis IN 46204  
Charles J. Hammett  
Director, Information Technology  
charles.hammett@highpointglobal.com  
(317) 576-4500

## CASE STUDY

Denver-based **Sage Hospitality** is ahead of the curve in having high-volume bandwidth ready for demanding business guests, both individually and in corporate groups. Comcast helps Sage deliver an enhanced experience for business guests, cost-effectively, with Comcast Business Services.

Kelly L. McCourt, Vice President of Marketing for Sage Hospitality, explains, "Sage's business guests sometimes require greater broadband capabilities than a standard hotel offers. We have technology groups that would like to have 10 Mbps, 20 Mbps, sometimes more. With Comcast's services, we can scale up easily without relying on legacy T1 lines."

Sage Hospitality's IT operation oversees over forty prestigious properties around the United States. Roughly 2,000 of its rooms are served by Comcast broadband, scalable as needed, for video and Ethernet. Both are central to the experience Sage wants all its guests to enjoy.

The streamlined equipment housed in a single-location makes for easier maintenance than distributed equipment in every room. "High-definition TV is an in-room amenity all guests enjoy," McCourt says. "With Comcast it's easy to offer this service."

Comcast Business Services delivers cost effective solutions. "There can be significant cost advantages when you compare broadband with legacy services," McCourt affirms.

# COMCAST BUSINESS

## 3.3.3 Offeror Technical Response to RFP Requirements

### Solution Overview

Comcast is uniquely positioned to offer long-term value to support current and future technology requirements. Based on the requirements specified Comcast would specifically propose solution offering for Functional Area III and IV. Product Technical information has been provided to reference as well as a sample invoice in the appendix.

## 2.6 FUNCTIONAL AREA III - LAST MILE ACCESS DATA SERVICE REQUIREMENTS FOR ETHERNET DELIVERY

2.6.1 The Master Contractor shall adhere to the following Ethernet service specifications:

Ethernet Frame Size - The service shall support the delivery of CPE imposed 2.6.1.1 Ethernet frames greater than or equal to 1642 Bytes. For the purposes of this document, the definition of an Ethernet frame includes the following:

- Preamble - 8 Bytes
- DA (Destination Address) – 6 Bytes
- SA (Source Address) – 6 Bytes
- 3x802.1q Tags – 12 Bytes
- EtherType – 2 Bytes
- Payload – 1604 Bytes –  $1522+24+58=1604$
- CRC/FCS (Cyclical Redundancy Check) – 4 Bytes
- Support for an MTU of 2000 Bytes (or preferably larger)

Comcast Response: Comcast Ethernet Transport services support a Maximum Frame Size. The service supports a Maximum Transmission Unit (MTU) packet size of 1600 bytes to support untagged or 802.1Q tagged packet sizes. Jumbo Frame sizes can be supported on an Individual Case Basis (ICB). For On-Net Services delivered via the Comcast HFC Network, frame sizes may not exceed 1518 MTU size (1522 with a single VLAN tag). All frames that exceed specifications shall be dropped. Please reference product technical specifications provided.

2.6.1.2 The service shall be Ethertype agnostic, forwarding any frames with an Ethertype not otherwise indicated in the MEF specification if a MEF based service is offered.

Comcast Response: Comcast is Certified MEF Compliant for all Ethernet based products

2.6.1.3 Trouble/Service verification – The service shall support MEF based OAM: 2.6.1.3

- Shall support subscriber Maintenance Domain (MD) continuity check
- Shall support OAM/CFM at MD level 4 or lower (less)
- Shall support Y.1731 OAM to measure Latency/Jitter
- Provider is required to monitor its NID for 802.3AH Dying Gasp or equivalent

2.6.1.4 If the service does not support MEF based OAM, the service shall not interfere with the transmission of MEF OAM PDUs.

Comcast Response: Comcast is Certified MEF Compliant for all Ethernet based products

2.6.1.5 Bandwidth increment policy – Resolution of service speeds

- Service shall support in-service upgrade of service speeds when UNI speed does not change.
- Resolution of service speed shall be in increment no smaller than 20% of the UNI speed greater than the service speed. This means that the service should be orderable at a minimum resolution of 2, 4, 6, 8, 10, 20, 40, 60, 80, 100, 200, 400, 600, 800, 1000, 2000, 4000, 6000, 80000, and 10000Mbps. More fine resolution of orderable speeds is acceptable.

# COMCAST BUSINESS

Comcast Response: The service is offered with 10Mbps, 100Mbps, 1Gbps or 10Gbps Ethernet User-to-Network Interfaces (UNI) and is available in speed increments from 1Mbps to 10Gbps.

## Comcast Ethernet Network Service

Comcast Ethernet Network Service is a reliable, cost effective alternative to traditional hub and spoke network topologies using Frame Relay, TDM private lines or ATM, offering a flexible and scalable network solution. Perfect for organizations with many locations and high data traffic, Comcast Ethernet Network Service enables customers to connect physically distributed locations across a Metropolitan Area Network (MAN) as if they are on the same Local Area Network (LAN).

## Comcast Ethernet Private Line Service

Comcast Ethernet Private Line Service is a reliable, flexible, high bandwidth alternative to traditional TDM Private Lines, enabling customers to connect their Customer Premises Equipment (CPE) using a low cost Ethernet interface. Your organization can meet the demand of bandwidth-intensive applications without disrupting your internal customers' needs with flexible, scalable point-to-point configurations delivering high-capacity fiber connections between two sites.

## Comcast Ethernet Virtual Private Line Service

Comcast Ethernet Virtual Private Line Service is a reliable, flexible, cost effective alternative to traditional TDM Private Lines, Frame Relay or ATM, delivering the high bandwidth you need. Similar to Ethernet Private Line, Ethernet Virtual Private Line provides an Ethernet Virtual Connection (EVC) between two customer locations, replacing frame relay or ATM services while also supporting Service Multiplexed User Network Interfaces (UNI), allowing for a single physical connection to customer premise equipment for multiple virtual connections.

## Comcast Ethernet Dedicated Internet Service

Comcast Ethernet Dedicated Internet Service is a simple, reliable and flexible alternative to traditional private line dedicated Internet access services, providing high bandwidth and increased efficiencies. Ethernet Dedicated Internet provides an Ethernet Virtual Connection (EVC) from the customer premises location to a Comcast Internet Point of Presence (POP) router. Our Ethernet interface enables compatibility with your LAN.

## COMCAST BUSINESS DDOS MITIGATION SERVICE

Comcast Business Ethernet Dedicated Internet (EDI) is enabled with threat defense and mitigation functionality to respond to DDoS volumetric and flood attacks.

Comcast Business DDoS Mitigation is a subscription-based network

## Comcast Business Ethernet

### RELIABLE, RESILIENT DESIGN

High network availability, minimal latency and low packet loss

### FULLY SCALABLE SOLUTIONS

Symmetrical dedicated bandwidth configurable from 1Mbps to 10 Gbps

### BROAD & DIVERSE NETWORK

Your information travels across our own enhanced fiber network with 150,000 national route miles of fiber

### REDUNDANT CORE ARCHITECTURE

Rapid recovery time from network incidences

### OUR COMCAST BUSINESS PROMISE

Dedicated project managers, proactive monitoring to the customer premise, and 24x7 dedicated enterprise support

### TOP APPLICATIONS

- Remote LAN connectivity
- High-speed Internet access
- Server consolidation
- Data storage, backup, and recovery
- Transport for VoIP



# COMCAST BUSINESS

service that proactively detects DDoS attack traffic, alerts the customer when an attack is under way, and initiates mitigation to thwart the attacks. Comcast Business DDoS Mitigation Service provides real-time detection of volumetric and flood attacks such as UDP Floods, Web Flood, and DNS Application Floods.

Comcast Security Operations works closely with the customer to provision the service based on customer and network information, preconfigure countermeasure options and run acceptance tests to enable effective mitigation before service activation. Comcast monitors the customer network traffic for a specified set of IP addresses to be protected. When a DDoS attack is identified, an alert is sent to the customer via email and/or SMS to notify them of the attack.

During the mitigation process, Comcast diverts the customer's traffic, including DDoS attack traffic directed at the customer servers, to scrubbing centers distributed across the U.S. to filter and remove malicious traffic matching specific attack vectors. Simultaneously, the clean legitimate traffic is forwarded to the customer's network and servers through the use of a secure tunnel. Comcast Business DDoS Mitigation enables continued uptime of the customer's Internet business services during a DDoS attack.

## DDoS MITIGATION SERVICE OPTIONS

Comcast Business DDoS service options and the accompanying mitigation options are designed for customers' security sensitivities, attack frequency, and time period. Customers are mitigated 24x7x365 in the Comcast Business Security Operations Center.

A customer may choose from two subscription-based service options and associated mitigation options listed below.

1. Single Incident Service Option includes one mitigation incident in a monthly billing cycle. After one mitigation incident is used, an additional mitigation incident will require an incremental charge. A mitigation incident is a 24-hour time window in which Comcast provides the customer with DDoS mitigation as necessary.
2. Unlimited Service Option provides an unlimited number of mitigation incidents in a monthly billing cycle. No incremental mitigation incident fees will be charged with this option.

## 2.7 FUNCTIONAL AREA IV – COMMODITY INTERNET SERVICE DELIVERY

### 2.7.1 Physical handoff of service to CPE (Customer Premise Equipment) – 802.3u 100BaseTX, 802.3ab 1000BaseT.

- a. Fiber variants may provide additional value but copper delivery is a required standard.
- b. Master Contractors must provide and maintain all required equipment up to and including the device that terminates the Ethernet physical UNI delivery.
- c. Points of demarcation shall be extended by the Master Contractor to within 25ft (as measured linearly along the same elevation) of the designated service delivery point requested by the State.
- d. Physical UNI speed shall be consistent with subscribed bandwidth profile.

Comcast Response: Physical handoff will be either Comcast Fiber or Comcast Hybrid Fiber Coax.

### 2.7.2 CPE IPv4 Specifications

- a. Shall support DHCP based IP allocation to the CPE device.
- b. Shall have the ability to provide a static IP address allocation.
- c. Shall have the ability to provide multiple IP addresses for CPE use.
- d. Assigned CPE device IP shall be publicly routable and not behind a carrier grade NAT infrastructure.
- e. NAT may be acceptable if the transport requirements are still met (see Section ## below).

Comcast Response: Comcast provides CPE for provisioning its services and the delivery of the UNI. Comcast will retain ownership and management responsibility for this CPE. As a result, the CPE must only be used for

# COMCAST BUSINESS

delivering Comcast services. Customers are required to shape their egress traffic to the contracted CIR. IP address space is an essential requirement for all Internet access services. Customers can obtain additional IPv4 addresses if required. Customers may also request a /48 of IPv6 addresses if they would like to enable a native dual stack solution.

## 2.7.3 IPv4 Transport Specifications

- a. The transport service shall provide full access (unrestricted) to the Internet in terms of supported protocols and port numbers. If restrictions are applied to the service, the Master Contractor shall disclose the governing policies clearly indicating what protocols and ports are blocked. Security functions such as CPE source address validation are acceptable and expected by the State.
- b. At a minimum the service shall support transport for IPv4 protocol 50, 51 as well as UDP port 500 to support IPSEC based services. Master Contractors shall indicate that these protocols/services are transported without restriction in terms of policing or any other modification outside of the other general supported transport services provided by the solution.
- c. Service Level Agreements (SLA) requirements must include:
  - i. Last mile delay and packet loss acceptance tolerance as measured between the CPE and defined logical next hop routing device (Provider)
  - ii. Packet loss and delay between CPE and provider peering devices to external autonomous systems (provider backbone)
  - iii. Packet loss and delay tolerances for peering connections from provider network to upstream autonomous systems
  - iv. Service uptime SLA
  - v. SLA for service calls as well as what costs may be incurred by the customer associated with outage/performance degradation reported.

Comcast Response: Comcast has read and understands, please reference technical product information provide. Please reference the charge below for Comcast Ethernet Dedicated Internet SLAs

| On-Net Services (< 250 miles)                            |          |
|--|----------|
| Availability (On-Net Services delivered via Fiber)       | > 99.99% |
| Availability (On-Net Services delivered via HFC Network) | > 99.9%  |
| Off-Net Services   |          |
| Availability (Off-Net)                                   | > 99.95% |

Comcast Business Internet is a Coax based service and is a best effort product.

## 2.7.4 Provider Peering Services

The State operates its own Internal ISP network service under AS27026. Currently this network has established direct mutual peering services at Equinix in Virginia as well as Tierpoint in Baltimore. As indicated above the primary use of the commodity ISP services will be to provide backhaul services for state employees to their home networks running on the states infrastructure. Direct mutual peering service between the State and potential last mile broadband service providers would be mutually beneficial.

Comcast Response: Comcast has reads and understands. Comcast provides both free and paid peering. Options are available, and can be discussed with the account team on an individual case basis.

## Comcast Internet Services Offered.

### Comcast Ethernet Dedicated Internet Service

Comcast Ethernet Dedicated Internet Service is a simple, reliable and flexible alternative to traditional private line dedicated Internet access services, providing high bandwidth and increased efficiencies. Ethernet Dedicated

# COMCAST BUSINESS

Internet provides an Ethernet Virtual Connection (EVC) from the customer premises location to a Comcast Internet Point of Presence (POP) router. Our Ethernet interface enables compatibility with your LAN.

## Comcast Business Internet Services

The need for bandwidth is increasing faster than most business can keep up. Comcast Business Internet offers bandwidth that DSL can't deliver with our speed tiers:

- 25Mbps/10Mbps
- 50Mbps/10Mbps
- 75Mbps/15Mbps
- 100Mbps/20Mbps
- 150Mbps/20Mbps
- 250Mbps/25Mbps
- 500Mbps/35Mbps
- 1,000Mbps/35Mbps
- Business Class support

## COMPLETE RELIABILITY WITH AUTOMATIC 4G WIRELESS BACKUP

When you run a business, you need a strong, reliable connection to keep moving forward. When you're not connected, it's disruptive to your business. No business likes downtime — that's why Comcast Business is the first broadband provider to offer an automatic 4G LTE wireless backup connection and 8-hours of battery backup. If internet connection is lost, it automatically kicks in with the stronger of two redundant wireless networks, powering business functions like point of sale, cloud applications, back office connections and email until full connectivity can be restored. That's the power of complete reliability.

### AUTOMATIC 4G WIRELESS INTERNET BACKUP

4G LTE wireless internet backup connects automatically

### 8-HOUR BATTERY BACKUP

Even in a power outage, stay connected with backup battery power for up to 8 hours

## Proposed Solution

The proposed solution was designed to enable demanding IP based applications. The network easily meets the infrastructure demands of bandwidth-intensive applications and limits the need to purchase or configure additional WAN technology. This service has very high availability so that interruptions are minimized.

This is a scalable and flexible service. With Comcast, your organization gets true any-to-any connectivity which allows traffic to move from any site to any other site within the network through a single Ethernet interface.

You will also have the ability to have a network solution that meets today's requirements but is capable of scaling to other locations or to meet future bandwidth demands. If, or when, you need additional network capacity, an upgrade agreement would be negotiated with Comcast and the billing terms would be specified in that agreement.

Finally, Comcast will supply dedicated access to the Internet using Comcast's Ethernet Dedicated Internet Service (EDI). EDI is a symmetrical, dedicated Internet access service provisioned on an Ethernet platform that is easy and fast to upgrade. Comcast will provision Internet connectivity for the sites to jointly access the Internet. Your organization will have the ability to scale that connection in 1 Mbps increments up to 10 Mbps or 10 Mbps increments up to 100 Mbps or 100 Mbps increments up to 10 Gbps depending on configuration.

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Comcast service can easily scale to accommodate new bandwidth requirements. Comcast has uniquely diverse routing, commonly physically disparate from most other Telco provider's networks. Bandwidth can be added very quickly, often within hours.

With Comcast, your organization will leverage our extensive fiber network for a reliable and scalable network and connection to the Tier 1 Internet backbone using a simple Ethernet interface that allows for true plug and play compatibility. Additionally, with Comcast there are no local loop charges, typical with other service providers.

## Summary

At each of the locations specified in this response, Comcast will install network edge equipment that will facilitate the connection between your network and ours. As part of the service, Comcast will provide, monitor and maintain the edge devices. Comcast also provides web-based monitoring and reporting tools available 24x7 upon request.

With Comcast you will receive a trusted data transport solution from the largest broadband provider offering superior flexibility in configurations and pricing. Combine our years of commercial experience with leading edge innovative technology and service capabilities and differentiation among networking service providers becomes much clearer.

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## Ethernet Network Service Description

### Service Description

Comcast Ethernet Network Service (ENS) enables customers to connect physically distributed locations across a Metropolitan Area Network (MAN) as if they are on the same Local Area Network (LAN). The service provides VLAN transparency enabling customers to implement their own VLANs without any coordination with Comcast. ENS is a reliable, more flexible, scalable, and cost-effective alternative to traditional hub and spoke network topologies using Frame Relay, TDM private lines or IP VPNs.



ENS offers three Classes of Service (CoS): Basic, Priority, and Premium. CoS options enable customers to select the CoS that best meets their applications' performance requirements. The service is offered with 10Mbps, 100Mbps, 1Gbps or 10Gbps Ethernet User-to-Network Interfaces (UNI) and is available in increments from 1Mbps to 10Gbps.

Comcast's Ethernet Network Service is Certified MEF Compliant.

### Section 1. Technical Specifications

**1.1 Ethernet User-to-Network Interface.** The service provides bidirectional, full duplex transmission of Ethernet frames using a standard IEEE 802.3 Ethernet interface. Figure 1 lists the available UNI physical interfaces, their associated Committed Information Rate (CIR) bandwidth increments and the Committed Burst Sizes (CBS).

| UNI Speed | UNI Physical Interface   | CIR Increments | CBS (bytes) |
|-----------|--------------------------|----------------|-------------|
| 10Mbps    | 10BaseT                  | 1Mbps          | 25,000      |
| 100Mbps   | 100BaseT                 | 10Mbps         | 250,000     |
| 1Gbps     | 1000BaseT or 1000BaseSX  | 100Mbps        | 2,500,000   |
|           |                          | 1000Mbps       | 25,000,000  |
| 10Gbps    | 10GBASE-SR or 10GBASE-LR | 10000Mbps      | 25,000,000  |

Figure 1: Available UNI Interface types and CBS values for different CIR Increments

**1.2 Maximum number of UNIs.** The service supports up to 100 UNIs per network. Additional UNIs are considered on an Individual Case Basis (ICB).

**1.3 Class of Service Options.** The service offers three CoS options. The CoS options allow for differentiated service performance levels for different types of network traffic. It is used to prioritize customer mission-critical traffic from lesser priority traffic in the network. The customer must specify a CIR for each CoS to indicate how much bandwidth should be assigned to it. Figure 2 lists the service performance objectives associated with On-Net (for distances within 250 miles) and Off-Net Services. Only Basic or Priority CoS are permissible for On-Net and Off-Net services delivered via the Comcast Hybrid Fiber Coax (HFC) Network. Locations delivered via Off-Net Services will only guarantee the CoS value for the On-Net portion of the service. However, the end-to-end service will honor the committed performance tier metrics.

| Performance Objective                                    | Class of Service (CoS) |          |          |
|--|------------------------|----------|----------|
|  | Premium                | Priority | Basic    |
| <b>On-Net Services (~250 miles)</b>                      |                        |          |          |
| Latency (one way)  | < 12ms                 | < 23ms   | < 45ms   |
| Jitter (one way)   | < 2ms                  | < 10ms   | < 20ms   |
| Packet Loss (one way)                                    | < 0.001%               | < 0.01%  | < 1%     |
| Availability (On-Net Services delivered via Fiber)       | > 99.99%               | > 99.99% | > 99.99% |
| Availability (On-Net Services delivered via HFC Network) | Not Applicable         | > 99.9%  | > 99.9%  |
| <b>Off-Net Services delivered via Fiber</b>              |                        |          |          |
| Availability   | > 99.95%               | > 99.95% | > 99.95% |
| <b>Off-Net Services delivered via Non-Fiber</b>          |                        |          |          |
| Availability   | > 99.9%                | > 99.9%  | > 99.9%  |

Figure 2: CoS Performance Objectives

**1.4 CoS Identification and Marking.** The customer must mark all packets using 802.1p CoS values as specified in Figure 3 to ensure the service will provide the intended CoS performance objectives specified in Figure 2. Locations delivered via On-Net or Off-Net Services delivered via the HFC Network will only honor Basic or Priority CoS values. All other values will be treated as Basic.

| CoS      | 802.1p |
|----------|--------|
| Premium  | 5      |
| Priority | 2-3    |
| Basic    | 0-1    |

Figure 3: CoS Marking

**1.5 Traffic Management.** Comcast's network traffic-policing policies restrict traffic flows to the subscribed CIR for each service class. If the customer-transmitted bandwidth rate for any CoS exceeds the subscription rate (CIR) and burst size (CBS), Comcast will discard this traffic. For packets marked with a non-conformant CoS marking, the service will transmit them using the Basic service class without altering the customer's CoS markings.

**1.6 MAC Addresses.** Comcast supports up to 250 MAC addresses per UNI and up to 2500 MAC addresses per ENS Domain.

**1.7 Maximum Frame Size.** The service supports a Maximum Transmission Unit (MTU) packet size of 1600 bytes to support untagged or 802.1Q tagged packet sizes. Jumbo Frame sizes can be supported on an Individual Case Basis (ICB).

**1.8 VLAN Tag Preservation.** The service supports IEEE 802.1Q VLAN-tagged customer packets. All customer VLAN IDs and priority code points (IEEE 802.1p) for CoS are transmitted and received unaltered by the service. Untagged packets are mapped to the native VLAN specified by customer. Customers may configure their own VLANs on their customer owned Customer Premise Equipment (CPE) without coordination with Comcast. Comcast may reserve one VLAN for network management purposes.

**1.9 Ethernet Service Frame Disposition.** Different types of Ethernet frames are processed differently by the service. Frames may pass unconditionally through the network or may be limited as in the case of broadcast, unknown unicast and multicast frames to ensure acceptable service performance. Refer to Figure 4 for Comcast's service frame disposition for each service frame type.

| Service Frame Type | Service Frame Delivery               |
|--------------------|--------------------------------------|
| Unicast            | All frames delivered unconditionally |
| Multicast          | Frames delivered conditionally       |
| Broadcast          | Frames delivered conditionally       |

Figure 4: Service Frame Delivery Disposition

**1.10 Layer 2 Control Protocol (L2CP) Processing.** The service will discard, tunnel across the Comcast network, or peer (process) L2CP service frames at each UNI. Refer to Figure 5 for Comcast's L2CP disposition. For L2CPs with multiple disposition possibilities, the customer must specify to Comcast which disposition should be taken. The default disposition is to discard these L2CP service frames.

# COMCAST BUSINESS

| Destination MAC Address                     | Layer 2 Control Protocol | L2CP Frame Disposition                          |
|---|--------------------------|---|
| 01-80-C2-00-00-00                           | STP, RSTP, MSTP          | Discard (All UNIs)                              |
| 01-80-C2-00-00-01                           | PAUSE                    | Discard (All UNIs)                              |
| 01-80-C2-00-00-02                           | LACP, LAMP               | Discard (All UNIs)                              |
| 01-80-C2-00-00-02                           | Link OAM                 | Peer or Discard (disposition specified per UNI) |
| 01-80-C2-00-00-03                           | 802.1X                   | Discard (All UNIs)                              |
| 01-80-C2-00-00-07                           | E-LMI                    | Discard (All UNIs)                              |
| 01-80-C2-00-00-0E                           | LLDP                     | Discard (All UNIs)                              |
| 01-80-C2-00-00-20 through 01-80-C2-00-00-2F | GARP, MRP                | Tunnel (All UNIs)                               |

Figure 5: L2CP Frame Disposition

**111 Online Reporting.** Comcast provides the customer with password-protected access to online reports containing historical network traffic information. Reports may vary based on the customer solution.

## Section 2. Monitoring, Technical Support and Maintenance

**2.1 Network Monitoring.** Comcast monitors all Comcast Services purchased by a customer on a 24x7x365 basis.

**2.2 Technical Support.** Comcast provides customers a toll-free trouble reporting telephone number to the customer Enterprise Technical Support (ETS) that operates on a 24x7x365 basis. Comcast provides technical support for service-related inquiries. Technical support will not offer consulting or advice on issues relating to CPE not provided by Comcast.

**2.3 Escalation.** Reported troubles are escalated within the Comcast ETS to meet the standard restoration interval described in the Service Level Objectives. Troubles are escalated within the Comcast ETS as follows: Supervisor at the end of the standard interval plus one hour; to the Manager at the end of the standard interval plus two hours, and to the Director at the end of the standard interval plus four hours.

**2.4 Maintenance.** Comcast's standard maintenance window is Sunday to Saturday from 12:00am to 6:00am local time. Scheduled maintenance is performed during the maintenance window and will be coordinated between Comcast and the customer. Comcast provides a minimum of forty-eight (48) hour notice for non-service impacting scheduled maintenance. Comcast provides a minimum of seven (7) days notice for service impacting planned maintenance. Emergency maintenance is performed as needed.

## Section 3. Service Level Objectives

Comcast provides Service Level Objectives for the service, including network availability, mean time to respond, and mean time to restore. The service objectives are measured monthly from the Comcast point of demarcation.

**3.1 Availability.** Availability is a measurement of the percentage of total time that the service is operational when measured over a 30 day period. Service is considered "inoperative" when either of the following occurs: (i) there is a total loss of signal for the service, (ii) output signal presented to the customer by Comcast does not conform to the technical specifications in Section 1.

**3.2 Mean Time to Respond.** Mean Time to Respond is the average time required for the ETS to begin troubleshooting a reported fault. The Mean Time to Respond objective is fifteen (15) minutes upon receipt of a fault notification or from the time a trouble ticket is opened with the ETS.

**3.3 Mean Time to Restore.** Mean Time to Restore is the average time required to restore service to an operational condition as defined by the technical specifications in Section 1 of this document. The Mean Time to Restore objective is four (4) hours for electronic equipment failure or six (6) hours for fiber optic facilities failure from the time a trouble ticket is opened with the ETS.

## Section 4. Customer Responsibilities

Comcast provides CPE for provisioning its services and the delivery of the UNI. Comcast will retain ownership and management responsibility for this CPE. As a result, the CPE must only be used for delivering Comcast services. Customers are required to shape their egress traffic to the contracted CIR.

Customers have the following responsibilities related to the installation, support, and maintenance of the Service.

**4.1** Provide an operating environment with temperatures not below fifty-five (55) or above eighty-five (85) degrees Fahrenheit. Humidity shall not exceed ninety (90) percent at eighty-five (85) degrees Fahrenheit.

**4.2** Provide secure space sufficient for access to one (1) standard, freestanding, equipment cabinet at each of the customer facilities, no further than fifty feet from the customer router or switch interface.

**4.3** Provide outside cable entry conduit(s), entry cable ground point, and internal building conduit to allow Comcast the ability to rod/rope a fiber optic cable to the point of demarcation.

**4.4** Locate and mark all private underground utilities (Water, Electric, etc.) along path of new underground placement not covered by utility companies.

**4.5** Provide a pull rope in any existing duct that Comcast is to use and ensure existing duct is serviceable for Comcast use.

**4.6** Obtain 'right-of-way' entry easement for Comcast facilities and equipment from property owners at each customer location.

**4.7** The customer is responsible for coring of the building's outside wall and internal walls. Upon request, Comcast can perform this activity on an 'as needed' basis for an additional one-time fee.

**4.8** Provide UPS AC power equipment, circuit sizing to be determined, if applicable.

**4.9** Emergency local generator backup service, if applicable.

**4.10** Provide access to the buildings and point of demarcation at each customer location to allow Comcast and its approved Contractors to install fiber for service installation. Provide access to each location for regular (8am - 5pm) and emergency (24 hour) service and maintenance of Comcast's equipment and facilities.

**4.11** Provide, install and maintain a device that is capable of routing network traffic between the Service and the customer's Local Area Network (LAN).

**4.12** Customer must provide a point of contact (POC) for installation, service activation and any maintenance activities.

## Section 5. Definitions

**5.1 Latency.** Latency, also known as Frame Delay, is defined as the maximum delay measured for a portion of successfully delivered service frames over a time interval.

**5.2 Jitter.** Jitter, also known as Frame Delay Variation, is defined as the short-term variations measured for a portion of successfully delivered service frames over a time interval.

**5.3 Packet Loss.** Packet Loss, also known as Frame Loss, is the difference between the number of service frames transmitted at the ingress UNI and the total number of service frames received at the egress UNI.

# COMCAST BUSINESS

## Ethernet Dedicated Internet Description

### Service Description

Comcast's Ethernet Dedicated Internet (EDI) Service provides a reliable, simpler, more flexible, and higher bandwidth options than T1 or SONET-based dedicated Internet access services. The service is offered with a 10Mbps, 100Mbps, 1Gbps or 10Gbps Ethernet User-to-Network Interface (UNI) in speed increments from 1Mbps to 10Gbps subject to available capacity. The service provides an Ethernet Virtual Connection (EVC) from the customer premises location to a Comcast Internet Point of Presence (POP) router.



### Section 1. Technical Specifications

**1.1 Ethernet User-to-Network Interface.** The service provides bidirectional, full duplex transmission of Ethernet frames using a standard IEEE 802.3 Ethernet interface. Figure 1 lists the available UNI physical interfaces, their associated Committed Information Rate (CIR) bandwidth increments and the Committed Burst Sizes (CBS).

| UNI Speed | UNI Physical Interface   | CIR Increments | CBS (bytes) |
|-----------|--------------------------|----------------|-------------|
| 10Mbps    | 10BaseT                  | 1Mbps          | 25,000      |
| 100Mbps   | 100BaseT                 | 10Mbps         | 250,000     |
| 1Gbps     | 1000BaseT or 1000BaseSX  | 100Mbps        | 2,500,000   |
| 10Gbps    | 10GBASE-SR or 10GBASE-LR | 1000Mbps       | 25,000,000  |

Figure 1: Available UNI interface types and CBS values for different CIR increments

**1.2 Traffic Management.** Comcast's network traffic-policing policies restrict traffic flows to the subscribed, Committed Information Rate (CIR). If the customer-transmitted bandwidth rate exceeds the subscription rate (CIR) and burst size (CBS), Comcast will discard the non-conformant packets. The customer's router must shape their traffic to their contracted CIR.

**1.3 Maximum Frame Size.** The service supports a maximum transmission unit (MTU) frame size of 1518 bytes including Layer 2 Ethernet header and FCS.

**1.4 Layer 2 Control Protocol (L2CP) Processing.** All L2CP frames are discarded at the UNI.

**1.5 IP Address Allocation.** IP address space is an essential requirement for all Internet access services. Comcast assigns eight (8) routable IPv4 addresses to each customer circuit. Customers can obtain additional IPv4 addresses if required. Customers may also request a /48 of IPv6 addresses if they would like to enable a native dual stack solution.

**1.6 Domain Name Service.** Comcast provides primary and secondary Domain Name Service (DNS). DNS is the basic network service that translates host and domain names into corresponding IP addresses, and vice-versa.

**1.7 Border Gateway Protocol (BGP) Routing.** Comcast supports BGP-4 routing as an optional service feature. BGP-4 allows customers to efficiently multi-home across multiple ISP networks. The service requires an Autonomous System Number (ASN) be assigned to a customer by the American Registry for Internet Numbers (ARIN). Customers should also be proficient in BGP routing protocol to provision and maintain the service on their router. Section 5 "Comcast BGP Policy" provides further details. Comcast supports private peering if the customer is multi-homed to Comcast's network only.

### Section 2. Monitoring, Technical Support and Maintenance

**2.1 Network Monitoring.** Comcast monitors all Comcast Services purchased by a customer on a 24x7x365 basis.

**2.2 Technical Support.** Comcast provides customers a toll-free trouble reporting telephone number to the customer Enterprise Technical Support (ETS) that operates on a 24x7x365 basis. Comcast provides technical support for service-related inquiries. Technical support will not offer consulting or advice on issues relating Customer Premise Equipment (CPE) not provided by Comcast.

**2.3 Escalation.** Reported troubles are escalated within the Comcast ETS to meet the standard restoration interval described in the Service Level Objectives. Troubles are escalated within the ETS as follows: Supervisor at the end of the standard interval plus one (1) hour; to the Manager at the end of the standard interval plus two (2) hours, and to the Director at the end of the standard interval plus four (4) hours.

**2.4 Maintenance.** Comcast's standard maintenance window is Sunday to Saturday from 12:00am to 6:00am local time. Scheduled maintenance is performed during the maintenance window and will be coordinated between Comcast and customer. Comcast provides a minimum of forty-eight (48) hour notice for non-service impacting scheduled maintenance. Comcast provides a minimum of seven (7) days notice for service impacting planned maintenance. Emergency maintenance is performed as needed.

### Section 3. Service Level Objectives

Comcast provides Service Level Objectives for the service, including network availability, mean time to respond, and mean time to restore. The service objectives are measured monthly from the Comcast point of demarcation.

**3.1 Availability.** Availability is a measurement of the percentage of total time that the service is operational when measured over a 30 day period. Service is considered "inoperative" when either of the following occurs: (i) there is a total loss of signal for the service, (ii) output signal presented to the customer by Comcast does not conform to the technical specifications in Section 1. Figure 2 lists the availability objectives for each access Ethernet access type.

| On-Net Services (≤ 250 miles)                            |          |
|--|----------|
| Availability (On-Net Services delivered via Fiber)       | > 99.99% |
| Availability (On-Net Services delivered via HFC Network) | > 99.9%  |
| Off-Net Services   |          |
| Availability (Off-Net)                                   | > 99.95% |

Figure 2: Availability

**3.2 Mean Time to Respond.** Mean Time to Respond is the average time required for the ETS to begin troubleshooting a reported fault. The Mean Time to Respond objective is fifteen (15) minutes upon receipt of a fault notification or from the time a trouble ticket is opened with the ETS.

**3.3 Mean Time to Restore.** Mean Time to Restore is the average time required to restore service to an operational condition as defined by the technical specifications in Section 1 of this document. The Mean Time to Restore objective is four (4) hours for electronic equipment failure or six (6) hours for fiber optic facilities failure from the time a trouble ticket is opened with the ETS.

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## Section 4. Customer Responsibilities

Comcast provides CPE for provisioning its services and the delivery of the UNI. Comcast will retain ownership and management responsibility for this CPE. As a result, the CPE must only be used for delivering Comcast services. Customers are required to shape their egress traffic to the contracted CIR.

Customers have the following responsibilities related to the installation, support, and maintenance of the Service.

4.1 Provide an operating environment with temperatures not below fifty-five (55) or above eighty-five (85) degrees Fahrenheit. Humidity shall not exceed ninety (90) percent at eighty-five (85) degrees Fahrenheit.

4.2 Provide secure space sufficient for access to one (1) standard, freestanding, equipment cabinet at each of the customer facilities, no further than fifty feet from the customer router or switch interface.

4.3 Provide outside cable entry conduit(s), entry cable ground point, and internal building conduit to allow Comcast the ability to rod/rope a fiber optic cable to the point of demarcation.

4.4 Locate and mark all private underground utilities (Water, Electric, etc.) along path of new underground placement not covered by utility companies.

4.5 Provide a pull rope in any existing duct that Comcast is to use and ensure existing duct is serviceable for Comcast use.

4.6 Obtain 'right-of-way' entry easement for Comcast facilities and equipment from property owners at each customer location.

4.7 The customer is responsible for coring of the building's outside wall and internal walls. Upon request, Comcast can perform this activity on an 'as needed' basis for an additional one-time fee.

4.8 Provide UPS AC power equipment, circuit sizing to be determined, if applicable.

4.9 Emergency local generator backup service, if applicable.

4.10 Provide access to the buildings and point of demarcation at each customer location to allow Comcast and its approved Contractors to install fiber for service installation. Provide access to each location for regular (8am - 5pm) and emergency (24 hour) service and maintenance of Comcast's equipment and facilities.

4.11 Provide, install and maintain a device that is capable of routing network traffic between the Service and the customer's Local Area Network (LAN).

4.12 Customer must provide a point of contact (POC) for installation, service activation and any maintenance activities.

## Section 5. Comcast BGP Policy

The following provides the routing requirements to interconnect with the Comcast network. Additional details of Comcast's BGP inbound/outbound network policy and traffic engineering is available upon request.

5.1 Customers must be multi-homed to run BGP, either:

- a. multi-homed within Comcast's network
- b. multi-homed with Comcast and another service provider

5.2 Customers must use an Autonomous System (AS) number assigned by a regional registrar American Registry for Internet Numbers (ARIN), Réseaux IP Européens (RIPE), or Asia Pacific Network Information Centre (APNIC) etc. that is registered to their organization.

- a. All customer route announcements must be registered with a regional registrar. A route object must exist for each route prefix in one of the well known global routing registries such as RADB.
- b. The customer ASN needs to be verifiable in WHOIS database.
- c. Comcast will only accept private peering when the customer is multi-homed to Comcast only.
- d. Comcast will support a 4-byte ASN starting 01/01/2010 in accordance with ARIN policy.
- e. Comcast will assign a private ASN in the range of 64512-65534 for private peering and not accept any customer provided private ASN.
- f. Comcast will strip off the private ASN when advertising to peers.

5.3 Customers must use a router that supports BGPv4.

- a. Comcast will not run BGP4 with customers connected on a link with less than 2Mbps bandwidth.
- b. Customers are responsible to ensure their peering routers have adequate CPE processing power and memory space if a full Internet table is requested.
- c. Comcast will employ all best-known practices to establish, maintain, and troubleshoot BGP4 sessions with all BGP4 compliant router vendors. However, Comcast makes no warranty that it can establish and maintain a BGP4 session with any CPE due to vendor interoperability.

5.4 Customers can specify one of the following received-prefixes options:

- a. Default-route only
- b. Comcast customer routes
- c. Comcast customer routes + default-route
- d. Full routes
- e. Full routes + default-route

5.5 Customer must be capable of configuring their BGP session with Comcast. This includes all setup of neighbor statements and all sanity checks on customer CPE.

5.6 Comcast requests the use of an MD5 authentication key for all EBGp sessions. The customer should specify the MD5 password.

5.7 Customers must prevent redistribution from their Interior Routing Protocol (IGP) into BGP. Customers should also apply restrictive filters on outbound announcements so that only the customer's intended outbound prefixes are announced to Comcast.

5.8 Comcast will assign a /30 IP address for the interfaces that connect to Comcast's network. This will be assigned from a Comcast address block publicly registered with ARIN and already advertised as part of a larger aggregate to the Internet.

5.9 Comcast will announce any portable or non-portable net block so long as this space is larger than /24, and the space is assigned to the customer via WHOIS or RWHOIS databases. If the net block does not belong to the customer and the net block is not already being announced from the customer's AS then Comcast will need to have an LOA (Letter of Agreement) from the true owner of the block stating that they are aware of, and are accepting of the fact that our customer wants to make the announcement through Comcast.

5.10 Comcast does not alter any of its BGP4 configurations, including route-maps, filter-policies, and communities, for any individual customer, but rather will dynamically alter BGP policy dependent on the customers' employment of predefined Comcast BGP communities. This ensures the Comcast network is built and maintained in a strategic, organized, and efficient fashion and reduces mean-time-to-repair for BGP related trouble.

# COMCAST BUSINESS

## Ethernet Private Line Description

### Service Description

Comcast Ethernet Private Line (EPL) Service is a reliable, more flexible, higher bandwidth alternative to traditional TDM Private Lines. The service enables customers to connect their Customer Premises Equipment (CPE) using a lower cost Ethernet interface. EPL enables customers to use any VLANs or Ethernet control protocol across the service without coordination with Comcast.



EPL provides one Ethernet Virtual Connection (EVC) between two customer locations. EPL offers three Classes of Service (CoS): Basic, Priority, and Premium. CoS options enable customers to select the CoS that best meets their applications' performance requirements. The service is offered with 10Mbps, 100Mbps, 1Gbps or 10Gbps Ethernet User-to-Network Interfaces (UNI) and is available in speed increments from 1Mbps to 10Gbps.

Comcast's Ethernet Private Line Service is Certified MEF Compliant.

### Section 1. Technical Specifications

**1.1 Ethernet User-to-Network Interface.** The service provides bidirectional, full duplex transmission of Ethernet frames using a standard IEEE 802.3 Ethernet Interface. Figure 1 lists the available UNI physical Interfaces, their associated Committed Information Rate (CIR) bandwidth increments and the Committed Burst Sizes (CBS).

| UNI Speed | UNI Physical Interface   | CIR Increments | CBS (bytes) |
|-----------|--------------------------|----------------|-------------|
| 10Mbps    | 10BaseT                  | 1Mbps          | 25,000      |
| 100Mbps   | 100BaseT                 | 10Mbps         | 250,000     |
| 1Gbps     | 1000BaseT or 1000BaseSX  | 100Mbps        | 2,500,000   |
|           |                          | 1000Mbps       | 25,000,000  |
| 10Gbps    | 10GBASE-SR or 10GBASE-LR | 10000Mbps      | 25,000,000  |

Figure 1: Available UNI interface types and CBS values for different CIR Increments

**1.2 Class of Service Options.** The service offers three CoS options. The CoS options allow for differentiated service performance levels for different types of network traffic. It is used to prioritize customer mission-critical traffic over lesser priority traffic in the network. The customer must specify a CIR for each CoS to indicate how much bandwidth should be assigned to it. Figure 2 lists the service performance objectives associated with On-Net (for distances within 250 network miles) and Off-Net Services. Only Basic or Priority CoS are permissible for On-Net and Off-Net services delivered via the Comcast Hybrid Fiber Coax (HFC) Network. Locations delivered via Off-Net Services will only guarantee the CoS value for the On-Net portion of the service. However, the end-to-end service will honor the committed performance tier metrics.

| Performance Objective                                    | Class of Service (CoS) |          |          |
|--|------------------------|----------|----------|
|  | Premium                | Priority | Basic    |
| <b>On-Net Services (&lt; 250 miles)</b>                  |                        |          |          |
| Latency (one way)  | < 12ms                 | < 23ms   | < 45ms   |
| Jitter (one way)   | < 2ms                  | < 10ms   | < 20ms   |
| Packet Loss (one way)                                    | < 0.001%               | < 0.01%  | < 1%     |
| Availability (On-Net Services delivered via Fiber)       | > 99.99%               | > 99.99% | > 99.99% |
| Availability (On-Net Services delivered via HFC Network) | Not Applicable         | 99.9%    | > 99.9%  |
| <b>Off-Net Services delivered via Fiber</b>              |                        |          |          |
| Availability   | > 99.95%               | > 99.95% | > 99.95% |
| <b>Off-Net Services delivered via Non-Fiber</b>          |                        |          |          |
| Availability   | > 99.9%                | > 99.9%  | > 99.9%  |

Figure 2: CoS Performance Objectives

**1.3 CoS Identification and Marking.** Customers must mark all packets using 802.1p CoS values as specified in Figure 3 to ensure the service will provide the intended CoS performance objectives specified in Figure 2. Locations delivered via On-Net or Off-Net Services delivered via the HFC Network will only honor Basic or Priority CoS values. All other values will be treated as Basic.

| CoS      | 802.1p |
|----------|--------|
| Premium  | 5      |
| Priority | 2-3    |
| Basic    | 0-1    |

Figure 3: CoS Marking

**1.4 Traffic Management.** Comcast's network traffic-policing policies restrict traffic flows to the subscribed CIR for each service class. If the customer-transmitted bandwidth rate for any CoS exceeds the subscription rate (CIR) and burst size (CBS), Comcast will discard the non-conformant packets. For packets marked with a non-conformant CoS marking, the service will transmit them using the Basic service class without altering the customer's CoS markings.

**1.5 Maximum Frame Size.** The service supports a Maximum Transmission Unit (MTU) packet size of 1600 bytes to support untagged or 802.1Q tagged packet sizes. Jumbo Frame sizes can be supported on an Individual Case Basis (ICB). For On-Net Services delivered via the Comcast HFC Network, frame sizes may not exceed 1518 MTU size (1522 with a single VLAN tag). All frames that exceed specifications shall be dropped.

**1.6 VLAN Tag Preservation.** The service supports IEEE 802.1Q VLAN-tagged customer packets. All customer VLAN IDs and priority code points (IEEE 802.1p) for CoS are transmitted and received unaltered by the service. Untagged packets are mapped to the native VLAN specified by customer. Customers may configure their own VLANs on their customer owned CPE without coordination with Comcast. Comcast may reserve one VLAN for network management purposes.

**1.7 Ethernet Service Frame Disposition.** The service delivers all service frames associated with the EVC unconditionally across the network as specified in Figure 4.

| Service Frame Type | Service Frame Delivery               |
|--------------------|--------------------------------------|
| Unicast            | All frames delivered unconditionally |
| Multicast          | All frames delivered unconditionally |
| Broadcast          | All frames delivered unconditionally |

Figure 4: Service Frame Delivery Disposition

**1.8 Layer 2 Control Protocol (L2CP) Processing.** Certain L2CP frames are discarded at the UNI, tunneled across the Comcast network or peered at (processed by) the UNI. Refer to Figure 5 for Comcast's L2CP disposition. For L2CPs with multiple disposition possibilities, the customer must specify to Comcast which disposition should be taken. The default disposition is to discard these L2CP service frames.

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| Destination MAC Address                     | Layer 2 Control Protocol | L2CP Frame Disposition                          |
|---|--------------------------|---|
| 01-80-C2-00-00-00                           | STP, RSTP, MSTP          | Tunnel (All UNIs)                               |
| 01-80-C2-00-00-01                           | PAUSE                    | Discard (All UNIs)                              |
| 01-80-C2-00-00-02                           | LACP, LAMP               | Discard (disposition specified per UNI)         |
| 01-80-C2-00-00-02                           | Link OAM                 | Peer or Discard (disposition specified per UNI) |
| 01-80-C2-00-00-03                           | 802.1X                   | Tunnel (All UNIs)                               |
| 01-80-C2-00-00-07                           | E-LMP                    | Tunnel (All UNIs)                               |
| 01-80-C2-00-00-0E                           | LLDP                     | Tunnel (All UNIs)                               |
| 01-80-C2-00-00-20 through 01-80-C2-00-00-2F | GARP, MRP                | Tunnel (All UNIs)                               |

Figure 5: L2CP Frame Disposition

## Section 2. Monitoring, Technical Support and Maintenance

**2.1 Network Monitoring.** Comcast monitors all Comcast Services purchased by a customer on a 24x7x365 basis.

**2.2 Technical Support.** Comcast provides customers a toll-free trouble reporting telephone number to the customer Enterprise Technical Support (ETS) that operates on a 24x7x365 basis. Comcast provides technical support for service-related inquiries. Technical support will not offer consulting or advice on issues relating CPE not provided by Comcast.

**2.3 Escalation.** Reported troubles are escalated within the Comcast ETS to meet the standard restoration interval described in the Service Level Objectives. Troubles are escalated within the Comcast ETS as follows: Supervisor at the end of the standard interval plus one hour; to the Manager at the end of the standard interval plus two hours, and to the Director at the end of the standard interval plus four hours.

**2.4 Maintenance.** Comcast's standard maintenance window is Sunday to Saturday from 12:00am to 6:00am local time. Scheduled maintenance is performed during the maintenance window and will be coordinated between Comcast and the customer. Comcast provides a minimum of forty-eight (48) hour notice for non-service impacting scheduled maintenance. Comcast provides a minimum of seven (7) days notice for service impacting planned maintenance. Emergency maintenance is performed as needed.

## Section 3. Service Level Objectives

Comcast provides Service Level Objectives for the service, including network availability, mean time to respond, and mean time to restore. The service objectives are measured monthly from the Comcast point of demarcation.

**3.1 Availability.** Availability is a measurement of the percentage of total time that the service is operational when measured over a 30 day period. Service is considered "Inoperative" when either of the following occurs: (i) there is a total loss of signal for the service, (ii) output signal presented to the customer by Comcast does not conform to the technical specifications in Section 1.

**3.2 Mean Time to Respond.** Mean Time to Respond is the average time required for the ETS to begin troubleshooting a reported fault. The Mean Time to Respond objective is fifteen (15) minutes upon receipt of a fault notification or from the time a trouble ticket is opened with the ETS.

**3.3 Mean Time to Restore.** Mean Time to Restore is the average time required to restore service to an operational condition as defined by the technical specifications in Section 1 of this document. The Mean Time to Restore objective is four (4) hours for electronic equipment failure or six (6) hours for fiber optic facilities failure from the time a trouble ticket is opened with the ETS.

## Section 4. Customer Responsibilities

Comcast provides CPE for provisioning its services and the delivery of the UNI. Comcast will retain ownership and management responsibility for this CPE. As a result, the CPE must only be used for delivering Comcast services. Customers are required to shape their egress traffic to the contracted CIR.

Customers have the following responsibilities related to the installation, support, and maintenance of the Service.

**4.1** Provide an operating environment with temperatures not below fifty-five (55) or above eighty-five (85) degrees Fahrenheit. Humidity shall not exceed ninety (90) percent at eighty-five (85) degrees Fahrenheit.

**4.2** Provide secure space sufficient for access to one (1) standard, freestanding, equipment cabinet at each of the customer facilities, no further than fifty feet from the customer router or switch interface.

**4.3** Provide outside cable entry conduit(s), entry cable ground point, and internal building conduit to allow Comcast the ability to rod/rope a fiber optic cable to the point of demarcation.

**4.4** Locate and mark all private underground utilities (Water, Electric, etc.) along path of new underground placement not covered by utility companies.

**4.5** Provide a pull rope in any existing duct that Comcast is to use and ensure existing duct is serviceable for Comcast use.

**4.6** Obtain 'right-of-way' entry easement for Comcast facilities and equipment from property owners at each customer location.

**4.7** The customer is responsible for coring of the building's outside wall and internal walls. Upon request, Comcast can perform this activity on an 'as needed' basis for an additional one-time fee.

**4.8** Provide UPS AC power equipment, circuit sizing to be determined, if applicable.

**4.9** Emergency local generator backup service, if applicable.

**4.10** Provide access to the buildings and point of demarcation at each customer location to allow Comcast and its approved Contractors to install fiber for service installation. Provide access to each location for regular (8am - 5pm) and emergency (24 hour) service and maintenance of Comcast's equipment and facilities.

**4.11** Provide, install and maintain a device that is capable of routing network traffic between the Service and the customer's Local Area Network (LAN).

**4.12** Customer must provide a point of contact (POC) for installation, service activation and any maintenance activities.

## Section 5. Definitions

**5.1 Latency.** Latency, also known as Frame Delay, is defined as the maximum delay, measured for a portion of successfully delivered service frames over a time interval.

**5.2 Jitter.** Jitter, also known as Frame Delay Variation, is defined as the short-term variations measured for a portion of successfully delivered service frames over a time interval.

**5.3 Packet Loss.** Packet Loss, also known as Frame Loss, is the difference between the number of service frames transmitted at the ingress UNI and the total number of service frames received at the egress UNI.

# COMCAST BUSINESS

## Ethernet Virtual Private Line Description

### Service Description

Comcast Ethernet Virtual Private Line (EVPL) Service provides an Ethernet Virtual Connection (EVC) between two customer locations similar to Ethernet Private Line service but supports the added flexibility to multiplex multiple services (EVCs) on a single UNI at a customer's hub or aggregation site. The service is a reliable, more flexible, higher bandwidth and cost effective alternative to traditional TDM Private Lines, Frame Relay or ATM Layer 2 VPNs and IP VPNs.



EVPL offers three Classes of Service (CoS) including: Basic, Priority, and Premium. CoS options enable customers to select the CoS that best meets their applications' performance requirements. The service is offered with 10Mbps, 100Mbps, 1Gbps or 10Gbps Ethernet User-to-Network Interfaces (UNI) and is available in speed increments from 1Mbps to 10Gbps.

Comcast's Ethernet Network Service is Certified MEF Compliant.

### Section 1. Technical Specifications

**1.1 Ethernet User-to-Network Interface.** The service provides bidirectional, full duplex transmission of Ethernet frames using a standard IEEE 802.3 Ethernet Interface. Figure 1 lists the available UNI physical interfaces, their associated Committed Information Rate (CIR) bandwidth increments and the Committed Burst Sizes (CBS).

| UNI Speed | UNI Physical Interface   | CIR Increments | CBS (bytes) |
|-----------|--------------------------|----------------|-------------|
| 10Mbps    | 10BaseT                  | 1Mbps          | 25,000      |
| 100Mbps   | 100BaseT                 | 10Mbps         | 250,000     |
| 1Gbps     | 1000BaseT or 1000BaseSX  | 100Mbps        | 2,500,000   |
|           |                          | 1000Mbps       | 25,000,000  |
| 10Gbps    | 10GBASE-SR or 10GBASE-LR | 10000Mbps      | 25,000,000  |

Figure 1: Available UNI interface types and CBS values for different CIR increments

**1.2 Service Multiplexing.** The service enables customers to multiplex multiple services (EVCs) on a given UNI. A typical application for EVPL is to upgrade a hub and spoke topology where several remote (spoke) sites need to connect to a regional or central (hub) site. The hub site can have all remote site EVCs multiplexed on a single UNI eliminating the need for multiple ports on the customer's router or Ethernet switch. Note that when service multiplexing is used, the sum of CIR bandwidth for all EVCs multiplexed at the UNI cannot exceed the UNI port speed.

**1.3 Class of Service Options.** The service offers three classes of service. The CoS options allow for differentiated service performance levels for different types of network traffic. It is used to prioritize customer mission-critical traffic over lesser priority traffic in the network. The customer must specify a CIR for each CoS to indicate how much bandwidth should be assigned to it. Figure 2 lists the service performance objectives associated with On-Net (for distances within 250 network miles) and Off-Net Services. Only Basic or Priority CoS are permissible for On-Net and Off-Net services delivered via the HFC Network. Locations delivered via Off-Net Services will only guarantee the CoS value for the On-Net portion of the service. However, the end-to-end service will honor the committed performance tier metrics.

| Performance Objective                                    | Class of Service (CoS) |          |          |
|--|------------------------|----------|----------|
|  | Premium                | Priority | Basic    |
| On-Net Services (< 250 miles)                            |                        |          |          |
| Latency (one way)  | < 12ms                 | < 23ms   | < 45ms   |
| Jitter (one way)   | < 2ms                  | < 10ms   | < 20ms   |
| Packet Loss (one way)                                    | < 0.001%               | < 0.01%  | < 1%     |
| Availability (On-Net Services delivered via Fiber)       | > 99.99%               | > 99.99% | > 99.99% |
| Availability (On-Net Services delivered via HFC Network) | Not Applicable         | 99.9%    | > 99.9%  |
| Off-Net Services delivered via Fiber                     |                        |          |          |
| Availability   | > 99.95%               | > 99.95% | > 99.95% |
| Off-Net Services delivered via Non-Fiber                 |                        |          |          |
| Availability   | > 99.9%                | > 99.9%  | > 99.9%  |

Figure 2: CoS Performance Objectives

**1.4 CoS Identification and Marking.** Customers must mark all packets using 802.1p CoS values as specified in Figure 3 to ensure the service will provide the intended CoS performance objectives specified in Figure 2. Locations delivered via On-Net or Off-Net Services delivered via the HFC Network will only honor Basic or Priority CoS values. All other values will be treated as Basic.

| CoS      | 802.1p |
|----------|--------|
| Premium  | 5      |
| Priority | 2-3    |
| Basic    | 0-1    |

Figure 3: CoS Marking

**1.5 Traffic Management.** Comcast's network traffic-policing policies restrict traffic flows to the intended CIR for each service class. If the customer-transmitted bandwidth rate for any CoS exceeds the subscription rate (CIR) and burst size (CBS), Comcast will discard the non-conformant packets. For packets marked with a non-conformant CoS marking, the service will transmit them using the Basic service class without altering the customer's CoS markings.

**1.6 Maximum Frame Size.** The service supports a Maximum Transmission Unit (MTU) frame size of 1500 bytes to support untagged or 802.1Q tagged frame sizes. Jumbo Frame sizes can be supported on an individual Case Basis (ICB). For On-Net Services delivered via the Comcast HFC Network, frame sizes may not exceed 1518 MTU size (1522 with a single VLAN tag). All frames that exceed specifications shall be dropped.

**1.7 VLAN Tag Preservation.** The service supports IEEE 802.1Q VLAN-tagged customer frames. All customer VLAN IDs and priority code points (IEEE 802.1p) for CoS conforming to the C-VLAN/EVC map are transmitted and received unaltered by the service. If a native VLAN is specified by the customer in the C-VLAN/EVC map, untagged frames are mapped to the native VLAN and transmitted over the corresponding EVC. Customers must coordinate their C-VLAN add/move/delete/changes with Comcast. Comcast may reserve one VLAN for network management purposes.

**1.8 Standard number of EVCs per UNI:** up to 20 for Off-Net Services and On-Net Services delivered via fiber. Additional EVCs are available, charges may apply. Only one EVC is permitted for On-Net Services delivered via the Comcast HFC Network.

**1.9 Standard number of VLAN IDs per EVC:** up to 20. Additional VLAN IDs are available, charges may apply. Only 1 VLAN ID is permitted for On-Net Services delivered via the HFC Network.

**1.10 Ethernet Service Frame Disposition.** All Frames are delivered conditionally through the network based on which EVCs they are sent to as specified in the VLAN ID to EVC map provided by the customer. Refer to Figure 4 for Comcast's service frame disposition for each service frame type.

# COMCAST BUSINESS

| Service Frame Type | Service Frame Delivery         |
|--------------------|--------------------------------|
| Unicast            | Frames delivered conditionally |
| Multicast          | Frames delivered conditionally |
| Broadcast          | Frames delivered conditionally |

Figure 4: Service Frame Delivery Disposition

**1.1 Layer 2 Control Protocol (L2CP) Processing.** Certain L2CP frames are discarded at the UNI, tunneled across the Comcast network or peered at (processed by) the UNI. Refer to Figure 5 for Comcast's L2CP disposition. For L2CPs with multiple disposition possibilities, the customer must specify to Comcast which disposition should be taken. The default disposition is to discard these L2CP service frames.

| Destination MAC Address                     | Layer 2 Control Protocol | L2CP Frame Disposition                          |
|---|--------------------------|---|
| 01-80-C2-00-00-00                           | STP, RSTP, MSTP          | Discard (All UNIs)                              |
| 01-80-C2-00-00-01                           | PAUSE                    | Discard (All UNIs)                              |
| 01-80-C2-00-00-02                           | LACP, LAMP               | Discard (All UNIs)                              |
| 01-80-C2-00-00-02                           | Link OAM                 | Peer or Discard (disposition specified per UNI) |
| 01-80-C2-00-00-03                           | 802.1X                   | Discard (All UNIs)                              |
| 01-80-C2-00-00-07                           | E-LMI                    | Discard (All UNIs)                              |
| 01-80-C2-00-00-0E                           | LLDP                     | Discard (All UNIs)                              |
| 01-80-C2-00-00-20 through 01-80-C2-00-00-2F | GARP, MRP                | Tunnel (All UNIs)                               |

Figure 5: L2CP Frame Disposition

## Section 2. Monitoring, Technical Support and Maintenance

**2.1 Network Monitoring.** Comcast monitors all Comcast Services purchased by a customer on a 24x7x365 basis.

**2.2 Technical Support.** Comcast provides customers a toll-free trouble reporting telephone number to the customer Enterprise Technical Support (ETS) that operates on a 24x7x365 basis. Comcast provides technical support for service-related inquiries. Technical support will not offer consulting or advice on issues relating Customer Premise Equipment (CPE) not provided by Comcast.

**2.3 Escalation.** Reported troubles are escalated within the Comcast ETS to meet the standard restoration interval described in the Service Level Objectives. Troubles are escalated within the ETS as follows: Supervisor at the end of the standard interval plus one (1) hour; to the Manager at the end of the standard interval plus two (2) hours, and to the Director at the end of the standard interval plus four (4) hours.

**2.4 Maintenance.** Comcast's standard maintenance window is Sunday to Saturday from 12:00am to 6:00am local time. Scheduled maintenance is performed during the maintenance window and will be coordinated between Comcast and customer. Comcast provides a minimum of forty-eight (48) hour notice for non-service impacting scheduled maintenance. Comcast provides a minimum of seven (7) days notice for service impacting planned maintenance. Emergency maintenance is performed as needed.

## Section 3. Service Level Objectives

Comcast provides Service Level Objectives for the service, including network availability, mean time to respond, and mean time to restore. The service objectives are measured monthly from the Comcast point of demarcation.

**3.1 Availability.** Availability is a measurement of the percentage of total time that the service is operational when measured over a 30 day period. Service is considered "inoperative" when either of the following occurs: (i) there is a total loss of signal for the service, (ii) output signal presented to the customer by Comcast does not conform to the technical specifications in Section 1.

**3.2 Mean Time to Respond.** Mean Time to Respond is the average time required for the ETS to begin troubleshooting a reported fault. The Mean Time to Respond objective is fifteen (15) minutes upon receipt of a fault notification or from the time a trouble ticket is opened with the ETS.

**3.3 Mean Time to Restore.** Mean Time to Restore is the average time required to restore service to an operational condition as defined by the technical specifications in Section 1 of this document. The Mean Time to Restore objective is four (4) hours for electronic equipment failure or six (6) hours for facilities failure from the time a trouble ticket is opened with the ETS.

## Section 4. Customer Responsibilities

Comcast provides CPE for provisioning its services and the delivery of the UNI. Comcast will retain ownership and management responsibility for this CPE. As a result, the CPE must only be used for delivering Comcast services. Customers are required to shape their egress traffic to the contracted CIR.

Customers have the following responsibilities related to the installation, support, and maintenance of the Service.

**4.1** Provide an operating environment with temperatures not below fifty-five (55) or above eighty-five (85) degrees Fahrenheit. Humidity shall not exceed ninety (90) percent at eighty-five (85) degrees Fahrenheit.

**4.2** Provide secure space sufficient for access to one (1) standard, freestanding, equipment cabinet at each of the customer facilities, no further than fifty feet from the customer router or switch interface.

**4.3** Provide outside cable entry conduit(s), entry cable ground point, and internal building conduit to allow Comcast the ability to rod/rope a fiber optic cable to the point of demarcation.

**4.4** Locate and mark all private underground utilities (Water, Electric, etc.) along path of new underground placement not covered by utility companies.

**4.5** Provide a pull rope in any existing duct that Comcast is to use and ensure existing duct is serviceable for Comcast use.

**4.6** Obtain "right-of-way" entry easement for Comcast facilities and equipment from property owners at each customer location.

**4.7** The customer is responsible for coring of the building's outside wall and internal walls. Upon request, Comcast can perform this activity on an "as needed" basis for an additional one-time fee.

**4.8** Provide UPS AC power equipment, circuit sizing to be determined, if applicable.

**4.9** Emergency local generator backup service, if applicable.

**4.10** Provide access to the buildings and point of demarcation at each customer location to allow Comcast and its approved Contractors to install fiber for service installation. Provide access to each location for regular (8am - 5pm) and emergency (24 hour) service and maintenance of Comcast's equipment and facilities.

**4.11** Provide, install and maintain a device that is capable of routing network traffic between the Service and the customer's Local Area Network (LAN).

**4.12** Customer must provide a point of contact (POC) for installation, service activation and any maintenance activities.

## Section 5. Definitions

**5.1 Latency.** Latency, also known as Frame Delay, is defined as the maximum delay measured for a portion of successfully delivered service frames over a time interval.

**5.2 Jitter.** Jitter, also known as Frame Delay Variation, is defined as the short-term variations measured for a portion of successfully delivered service frames over a time interval.

**5.3 Packet Loss.** Packet Loss, also known as Frame Loss, is the difference between the number of service frames transmitted at the ingress UNI and the total number of service frames received at the egress UNI.

# COMCAST BUSINESS

## Comcast Business Internet

Comcast Business Internet offers download speeds up to 1Gbps, which means less time waiting and more time being productive. Plus, it's backed with 24x7 Comcast Business support.

An Internet service with new and innovative business solutions designed to help you work smarter and more efficiently. It's no wonder that more-and-more businesses are equipping their employees with the speed and reliability of Comcast Business Internet.

### FAST SPEEDS TO GET MORE DONE...FASTER

- Downloads up to 1Gbps, uploads up to 35Mbps.

Choose from different speed options to meet your needs:

|                                       |  |   |
|---------------------------------------|--|---|
| <b>Starter</b><br>• 16Mbps/3Mbps      | <b>Deluxe 25</b><br>• 25Mbps/10Mbps              | <b>Deluxe 50</b><br>• 50Mbps/10Mbps           |
| <b>Deluxe 75</b><br>• 75Mbps/15Mbps   | <b>Deluxe 100</b><br>• 100Mbps/20Mbps            | <b>Deluxe 150</b><br>• 150Mbps/20Mbps         |
| <b>Deluxe 250</b><br>• 250Mbps/25Mbps | <b>Business Internet 500</b><br>• 500Mbps/35Mbps | <b>Business Internet 1G</b><br>• 1Gbps/35Mbps |

- Static IP addresses are available (static IP supports IPv4 and IPv6\*).

### WiFi

- Business WiFi – separate private and guest access.
- WiFi Pro: The next level of WiFi access with more control, more customization, and more security.

### ADVANCED SECURITY TO PROTECT YOUR DATA, YOUR DEVICES, AND YOUR BUSINESS

- Available IP gateway provides on-site firewall protection, supports multiple computers and VPN connections for remote users, and features Stateful Packet Inspection (SPI).

### OUR COMCAST BUSINESS PROMISE

- 30 Day Money Back Guarantee
- Support Everywhere: Phone, Web, Onsite
- 24x7 Dedicated Business Support

### COMCAST BUSINESS SMARTOFFICE VIDEO MONITORING SOLUTION™

Benefits include crystal clear HD images, automatic cloud storage, instant mobile access, professional installation, and convenient support, with no big capital outlay.

- Delivers a wider camera view so you can see more with fewer cameras
- Get sharper, clearer night vision footage that provides better detail and accuracy

### COMCAST BUSINESS CLOUD SOLUTIONS™

An online marketplace of cloud-based applications that are built for business. Our Comcast Business specialists curate and maintain the marketplace, selecting some of the best apps designed to help boost your business's productivity.

- Online Backup
- File Sharing
- Security & Anti-Virus
- Marketing & CRM
- Web Conferencing
- Hosted Email
- Microsoft Office 365 (Word, Excel, PowerPoint)

# COMCAST BUSINESS

## 3.3.4 Financial Capability and Statements

### Comcast

| Year ended December 31 (in millions, except per share data)                                       | 2017 <sup>(a)</sup> | 2016       | 2015       |
|---|---------------------|------------|------------|
| <b>Statement of Income Data</b>   |                     |            |            |
| Revenue   | \$ 84,526           | \$ 80,403  | \$ 74,510  |
| Operating income  | 17,987              | 16,859     | 15,998     |
| Net income attributable to Comcast Corporation <sup>(a)</sup>                                     | 22,714              | 8,695      | 8,163      |
| Basic earnings per common share attributable to Comcast Corporation shareholders <sup>(b)</sup>   | 4.82                | 1.80       | 1.64       |
| Diluted earnings per common share attributable to Comcast Corporation shareholders <sup>(b)</sup> | 4.75                | 1.78       | 1.62       |
| Dividends declared per common share <sup>(b)</sup>  | 0.63                | 0.55       | 0.50       |
| <b>Balance Sheet Data (at year end)</b>   |                     |            |            |
| Total assets  | \$ 186,949          | \$ 180,500 | \$ 166,574 |
| Total debt, including current portion   | 64,556              | 61,046     | 52,621     |
| Comcast Corporation shareholders' equity  | 68,606              | 53,943     | 52,269     |
| <b>Statement of Cash Flows Data</b>   |                     |            |            |
| Net cash provided by (used in):   |                     |            |            |
| Operating activities  | 21,403              | 19,825     | 19,485     |
| Investing activities  | (13,704)            | (18,385)   | (11,964)   |
| Financing activities  | (7,572)             | (434)      | (9,136)    |

(a) For 2017, 2016 and 2015, refer to Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations included in this Annual Report on Form 10-K for a discussion of the effects of items impacting net income attributable to Comcast Corporation. In 2017, 2016, 2015, 2014 and 2013, net income attributable to Comcast Corporation is stated after deducting net income attributable to noncontrolling interests of \$186 million, \$350 million, \$250 million, \$212 million and \$319 million, respectively.

(b) Per share amounts are presented on a post-split basis (see Note 1 to Comcast's consolidated financial statements).

(c) 2017 net income attributable to Comcast Corporation and earnings per common share attributable to Comcast Corporation shareholders included a \$12.7 billion net income tax benefit as a result of the impacts of the 2017 tax reform legislation. Refer to Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations and Note 14 to Comcast's consolidated financial statements for further discussion.

### Financial Qualifications

Comcast is a wholly owned, indirect subsidiary of Comcast Corporation, from which Comcast receives its funding. As such, Comcast is not publicly held and does not release stand-alone financial results or associated financial information, except in limited circumstances to the extent required by law, and then, only under seal or a proprietary protective order. Please refer to the publicly filed external consolidated Comcast financial statements and earnings press releases posted at the Comcast Corporate web page: <http://www.cmcsk.com>.

# COMCAST BUSINESS

## 3.3.5 Insurance Submission



### CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
11/21/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

|   |   |       |
|---|---|-------|
| <b>PRODUCER</b><br>MARSH USA INC.<br>1717 Arch Street<br>Philadelphia, PA 19103-2797<br>Attn: Comcast.Certs@marsh.com Fax: 215-548-0360 | <b>CONTACT NAME:</b><br>PHONE (Aid. No. Ext):<br>FAX (Aid. No.):<br>E-MAIL:<br>ADDRESS: |       |
|   | <b>INSURER(S) AFFORDING COVERAGE</b>  |       |
| <b>INSURED</b><br>COMCAST CORPORATION<br>ONE COMCAST CENTER<br>1701 JOHN F. KENNEDY BLVD.<br>PHILADELPHIA, PA 19103                     | INSURER A: ACE American Insurance Company   | 22567 |
|   | INSURER B: Integrity Ins Co Of North America  | 43675 |
|   | INSURER C: ACE Property And Casualty Ins Co   | 20699 |
|   | INSURER D: ACE Fire Underwriters Ins. Co.   | 20762 |
|   | INSURER E: Aqil General Insurance Company   | 42757 |
|   | INSURER F:  |       |

**COVERAGES**      **CERTIFICATE NUMBER:** CLE-005523417-07      **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSURER | TYPE OF INSURANCE  | INSURER | POLICY NUMBER   | POLICY EFF | POLICY EXP | LIMITS   |
|---------|--|---------|---|------------|------------|--|
| A       | <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY<br><input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR<br><input checked="" type="checkbox"/> SFC \$100,000<br>GEN'L AGGREGATE LIMIT APPLIES PER:<br><input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC<br>OTHER: |         | XSLG27671252  | 12/01/2017 | 12/01/2018 | EACH OCCURRENCE \$ 4,900,000<br>DAMAGE TO RENTED PREMISES (EA occurrence) \$ 4,900,000<br>MED EXP (Any one person) \$ 10,000<br>PERSONAL & ADV INJURY \$ 4,900,000<br>GENERAL AGGREGATE \$ 25,000,000<br>PRODUCTS - COMP/OP AGG \$ 5,000,000 |
| A       | <input checked="" type="checkbox"/> AUTOMOBILE LIABILITY<br><input checked="" type="checkbox"/> ANY AUTO<br><input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS<br><input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY  |         | ISA H09063407   | 12/01/2017 | 12/01/2018 | COMBINED SINGLE LIMIT (EA accident) \$ 10,000,000<br>BODILY INJURY (Per person) \$<br>BODILY INJURY (Per accident) \$<br>PROPERTY DAMAGE (Per accident) \$   |
| C       | <input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR<br><input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE<br><input type="checkbox"/> CED <input checked="" type="checkbox"/> RETENTION \$  |         | XOO Q279C4640 003   | 12/01/2017 | 12/01/2018 | EACH OCCURRENCE \$ 10,000,000<br>AGGREGATE \$ 10,000,000   |
| B       | <input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY<br><input type="checkbox"/> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/OWNER EXCLUDED? (Mandatory in NH)<br>If yes, describe under DESCRIPTION OF OPERATIONS below   | Y/N     | WLR C64518933 (ACB)<br>WLR C64518945 (CA, MA)<br>SCF C64518957 (VA)<br>WLR C64518969 (TX) | 12/01/2017 | 12/01/2018 | <input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER<br>E.L. EACH ACCIDENT \$ 2,000,000<br>E.L. DISEASE - EA EMPLOYEE \$ 2,000,000<br>E.L. DISEASE - POLICY LIMIT \$ 2,000,000                                     |
| A       | Excess Workers Compensation  |         | VACUC64518970 (WA)  | 12/01/2017 | 12/01/2018 | EA ACC'D'S Employee's Policy SIR 2,000,000<br>5,000,000  |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
 EVIDENCE OF INSURANCE:

|   |   |
|---|---|
| <b>CERTIFICATE HOLDER</b><br>COMCAST BUSINESS COMMUNICATIONS, LLC<br>ONE COMCAST CENTER<br>1701 JOHN F. KENNEDY BLVD.<br>PHILADELPHIA, PA 19103 | <b>CANCELLATION</b><br>SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.<br><br>AUTHORIZED REPRESENTATIVE<br>of Marsh USA Inc.<br>Manashi Mukherjee <i>Manashi Mukherjee</i> |
|---|---|

# COMCAST BUSINESS

## Solution Provisioning and Project Plan

Typical site installations may take anywhere from 60 to 90 days for completion. Throughout the duration of the project a dedicated Comcast account team will be in contact providing status and answering any questions you may have.

### Project Kickoff Meeting

Comcast Business Communications, LLC project management team will conduct a "Customer Implementation Call" to discuss the overall project. Each location will be discussed for accuracy in terms of relay rack space, appropriate power, etc.

### Comcast Service Delivery Major Milestones:

- **Outside and Inside Surveys** – Comcast will conduct outside plant and customer site surveys.
- **Permits & Right of Entry Agreements** – Comcast will obtain required permits and work with property owner to obtain Right of Entry/Access agreements.
- **Service Configurations** – Comcast National Team will implement Network Core Configurations.
- **Outside and Inside Fiber/Coax Construction** – Comcast will complete outside and inside construction.
- **Customer Premise Equipment Installation/Plant Test Date (PTD)** – Comcast will dispatch to the customer's premise to install CPE, connect CPE to Fiber, and call Comcast Test & Turn-up to complete plant test.
- **Firm Order Commit (FOC)** – Comcast Service will be available to the customer. **FOC is 90 calendar days from customer signature.**

### Comcast Responsibilities:

- Construct all OSP and ISP fiber optic cabling up to the agreed upon locations from the site survey forms and connect number of sites (XX) locations.
- Call for locates of public utilities in the right of way.
- Restoration of disturbed grounds.
- Assemble, configure and install all Comcast provided network equipment on customer premise.
- Test and verify all appropriate fiber connections.
- Test and verify all appropriate data interfaces/connections and verify throughput.
- Provide 24x7x365 network monitoring.
- Provide contact list information including escalation procedures and NOC information.
- Provide documentation detail services including customer network interface drawings.
- And any additional agreements per site survey document.

Detailed information regarding the customer responsibilities is available in the Technical Specifications section of the proposal.

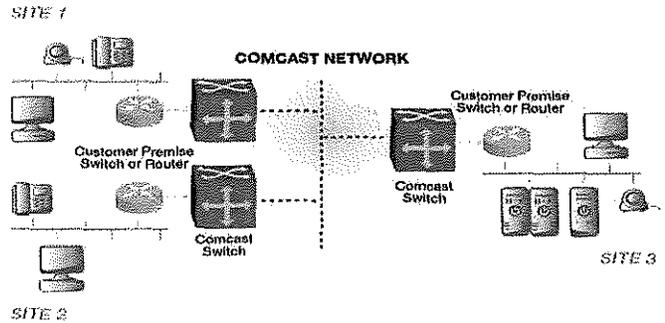
**Additional information can be provided upon request.**

# COMCAST BUSINESS

## Network Diagram

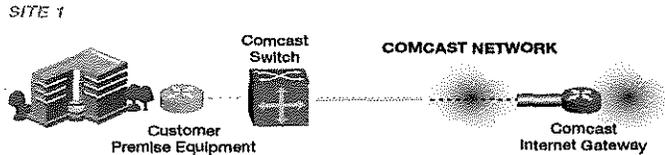
### ETHERNET NETWORK SERVICE (MULTIPOINT TO MULTIPOINT)

Connects physically distributed locations across a Metropolitan Area Network.



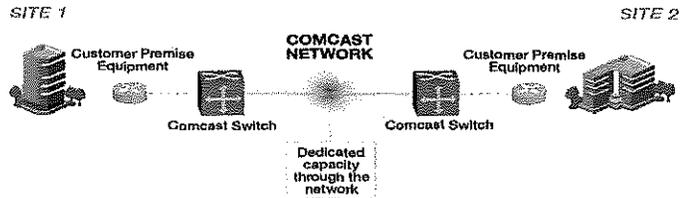
### ETHERNET DEDICATED INTERNET SERVICE

Provides dedicated and symmetrical link between existing LAN and public Internet.



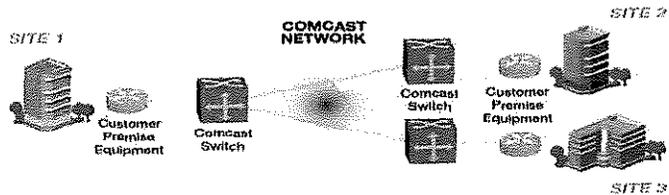
### ETHERNET PRIVATE LINE SERVICE (POINT TO POINT)

Enables use of any VLAN or Ethernet control protocol across the service.



### ETHERNET VIRTUAL PRIVATE LINE SERVICE (POINT TO MULTIPOINT)

Provides connection between one main location and multiple virtual locations.



*“Illustrative Diagram” – Actual installation may differ.*

# COMCAST BUSINESS

## Operations

Comcast provides high-quality service and effective maintenance of our network and customer base in several key business areas. These include: Network Operations and Field Operations. Comcast strongly suggests that all personnel involved in the decision process visit the network operations facilities of each of the bidders as part of the evaluation process.

### Network Operations

The Network Operations organization provides superior customer care, which includes monitoring, troubleshooting, and resolution through its advanced 24 x 7 x 365 Network Operations Center (NOC) with two redundant Customer Care Centers in Colorado and Illinois. Each is staffed to answer any questions, perform changes to existing services and assist with technical troubles. The Customer Care Centers are staffed with Enterprise Tier II and Tier III repair groups, easily facilitating higher level technical support. The NOC continuously monitors the network equipment, service health, and performance of the Comcast network, responds to network events and service degradations, dispatches local field technicians, and informs customers of service issues, in many cases before the customer has noticed the problem. The Network Operations group also provides technical support and responds to trouble calls from network service customers including carriers, TLS and Native ATM customers, and voice product customers, through a staff of Technical Support Representatives (TSRs). The Comcast NOC also operates a 24 x 7 x 365 Technical Customer Support helpdesk that responds to calls for all of Comcast services.

The NOC maintains a staff of engineers and technicians with an average of 12 years' tenure, thus ensuring business continuity. This staff is trained in an array of networks, elements, and technologies in the Comcast network (Ethernet, ATM, Frame Relay, SONET, T-1/T-3, local and long-distance telephony, Internet Access, and LAN/WAN based services). Comcast engineers and technicians have earned many industry certifications, including: CCIE (Cisco Certified Internetwork Expert), Cisco Certified Network Associate (CCNA), Cisco Certified Network Professional (CCNP), Microsoft Certified Systems Engineer (MCSE), A+, Network+, and other certifications in specific vendor equipment.

**One-Stop-Shop** – Care for all levels of Business products.

**Planned Maintenance** – Seven day advanced notice to Metro Ethernet and Advanced Voice Customers which include Trunking and Hosted PBX products.

**Dedicated Project Managers** for accurate and timely delivery of all Comcast products. Project Managers are your single Point of Contact.

**Proactive Monitoring** at the customer premise level allows quick resolution to network issues with fast response times. Comcast will generate a ticket if an alarm has been triggered on our network.

**Enterprise Monitoring** - Comcast has a robust set of tools to detect and isolate faults from network infrastructure to CPE issues.

### Field Operations

The role of Field Operations in Comcast is two-fold. First, Field Operations provides an effective field presence for technical support of our core (ATM, IP, Optical) network. They perform on-site repairs and trouble-shooting on a daily, ongoing basis and dispatch field technicians to support our voice switches and other hardware. These field crews are the "on-site" presence to remedying any network trouble.

Second, Field Operations provides leadership for customer installations. Field Operations Project Coordinators are assigned to each new account to singularly manage the local work required for each install. The Project Coordinator manages the dispatch of local technicians to install switches, routers, servers, and other equipment on the company side of the company/customer demarcation point.

# COMCAST BUSINESS

## **Network Security**

The Comcast Information Security Policy set defines the rules and processes that protect the information resources of Comcast. This set consists of supporting policies and standards including, but not limited to, Access Control, Business Continuity, Content Protection, Network Security, Physical and Environmental Security, etc.

Policies are reviewed at minimum annually. In some cases, internal or external drivers may warrant additional reviews of the policies. The Policy and Governance Council (PGC) is responsible for the maintenance of technology security policies and standards administered across Comcast.

## **Network Management Reporting**

The Comcast Business Customer Portal (BCP) is a web-based portal providing a central location for customers to view and manage their Ethernet services. Through the portal, customers can view their Ethernet sites and services including UNI ID, EVC ID, port speed, access type, bandwidth, and Class of Service (CoS). Additionally, customers can view historical performance data including latency, packet loss, jitter, availability, and utilization. Customer will be given a secure web login to review the external reporting data at their convenience.

# COMCAST BUSINESS

## Comcast Escalation Procedures

### NOC End user support and Escalation Procedures

The NOC is organized with a standard 3-tier escalation configuration with automatic escalation intervals. Tier 4 support is escalated to Comcast's Network Engineering Department. The NOC is staffed 24 x 7 x 365. Technicians remain on call 7 x 24 to assist with major problems. The NOC may also dispatch technicians 7 x 24. Customers are welcome to request to speak with a supervisor or manager at any time.

| Priority 1   |                    | Shift Lead | Manager  | Director | Vice President |
|--|--------------------|------------|----------|----------|----------------|
| Total outage; multiple customers or multiple locations   | Business Hours     | 15 Mins    | 30 Mins  | 1 Hour   | 3 Hours        |
|  | Non-Business Hours | 1 Hour     | 2 Hours  | 6 Hours  | 8 Hours        |
| Priority 2   |                    | Shift Lead | Manager  | Director | Vice President |
| Total outage, single customer/single location, or partial outage of multiple customers or multiple locations | Business Hours     | 1 Hour     | 2 Hours  | 4 Hours  | 12 Hours       |
|  | Non-Business Hours | 2 Hours    | 4 Hours  | 12 Hours | -              |
| Priority 3   |                    | Shift Lead | Manager  | Director | Vice President |
| Partial outage, single customer or location  | Business Hours     | 2 Hours    | 4 Hours  | 12 Hours | -              |
|  | Non-Business Hours | 6 Hours    | 12 Hours | -        | -              |

### Service Level Objectives

In the event of a service interruption, Comcast shall use commercially reasonable efforts to respond to the service interruption and to clear the service interruption within the time frames set forth below. Comcast shall notify customer that Comcast has dispatched its personnel to effect restoration and repair and shall inform customer when service has been restored.

| Category                                    | Objective  |
|---|------------|
| Network Availability                        | 99.99%     |
| Mean Time to respond telephonically to call | 30 minutes |
| Mean time to restore equipment              | 4 hours    |
| Mean time to restore fiber                  | 6 hours    |

# COMCAST BUSINESS

## Comcast Account Team

### Commercial Matters

John Stinebaugh  
Strategic Enterprise Account Executive  
410-513-0472  
john\_stinebaugh@comcast.com

### Technical Matters

Greg Milan  
Sales Engineer  
410-513-0420  
greg\_milan@comcast.com

### Manager

Joe Alvarina  
Director  
410-513-0470  
joe\_alvarina@comcast.com

**ATTACHMENT 3 BID PROPOSAL AFFIDAVIT**

**A. AUTHORITY**

I HEREBY AFFIRM THAT:

I (print name) Daniel I. Carr possess the legal authority to make this Affidavit.  
Vice President

**B. CERTIFICATION REGARDING COMMERCIAL NONDISCRIMINATION**

The undersigned bidder hereby certifies and agrees that the following information is correct: In preparing its bid on this project, the bidder has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not engaged in "discrimination" as defined in §19-103 of the State Finance and Procurement Article of the Annotated Code of Maryland. "Discrimination" means any disadvantage, difference, distinction, or preference in the solicitation, selection, hiring, or commercial treatment of a vendor, subcontractor, or commercial customer on the basis of race, color, religion, ancestry, or national origin, sex, age, marital status, sexual orientation, or on the basis of disability or any otherwise unlawful use of characteristics regarding the vendor's, supplier's, or commercial customer's employees or owners. "Discrimination" also includes retaliating against any person or other entity for reporting any incident of "discrimination". Without limiting any other provision of the solicitation on this project, it is understood that, if the certification is false, such false certification constitutes grounds for the State to reject the bid submitted by the bidder on this project, and terminate any contract awarded based on the bid. As part of its bid or proposal, the bidder herewith submits a list of all instances within the past 4 years where there has been a final adjudicated determination in a legal or administrative proceeding in the State of Maryland that the bidder discriminated against subcontractors, vendors, suppliers, or commercial customers, and a description of the status or resolution of that determination, including any remedial action taken. Bidder agrees to comply in all respects with the State's Commercial Nondiscrimination Policy as described under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland.

**B-1. CERTIFICATION REGARDING MINORITY BUSINESS ENTERPRISES.**

The undersigned bidder hereby certifies and agrees that it has fully complied with the State Minority Business Enterprise Law, State Finance and Procurement Article, §14-308(a)(2), Annotated Code of Maryland, which provides that, except as otherwise provided by law, a contractor may not identify a certified minority business enterprise in a bid or proposal and:

- (1) Fail to request, receive, or otherwise obtain authorization from the certified minority business enterprise to identify the certified minority proposal;
- (2) Fail to notify the certified minority business enterprise before execution of the contract of its inclusion in the bid or proposal;
- (3) Fail to use the certified minority business enterprise in the performance of the contract; or
- (4) Pay the certified minority business enterprise solely for the use of its name in the bid or proposal.

Without limiting any other provision of the solicitation on this project, it is understood that if the certification is false, such false certification constitutes grounds for the State to reject the bid submitted by the bidder on this project, and terminate any contract awarded based on the bid.

**B-2. CERTIFICATION REGARDING VETERAN-OWNED SMALL BUSINESS ENTERPRISES.**

The undersigned bidder hereby certifies and agrees that it has fully complied with the State veteran-owned small business enterprise law, State Finance and Procurement Article, §14-605, Annotated Code of Maryland, which provides that a person may not:

- (1) Knowingly and with intent to defraud, fraudulently obtain, attempt to obtain, or aid another person in fraudulently obtaining or attempting to obtain public money, procurement contracts, or funds expended under a procurement contract to which the person is not entitled under this title;
- (2) Knowingly and with intent to defraud, fraudulently represent participation of a veteran-owned small business enterprise in order to obtain or retain a bid preference or a procurement contract;
- (3) Willfully and knowingly make or subscribe to any statement, declaration, or other document that is fraudulent or false as to any material matter, whether or not that falsity or fraud is committed with the knowledge or consent of the person authorized or required to present the declaration, statement, or document;
- (4) Willfully and knowingly aid, assist in, procure, counsel, or advise the preparation or presentation of a declaration, statement, or other document that is fraudulent or false as to any material matter, regardless of whether that falsity or fraud is committed with the knowledge or consent of the person authorized or required to present the declaration, statement, or document;
- (5) Willfully and knowingly fail to file any declaration or notice with the unit that is required by COMAR 21.11.12; or
- (6) Establish, knowingly aid in the establishment of, or exercise control over a business found to have violated a provision of §B-2(1)—(5) of this regulation.

**C. AFFIRMATION REGARDING BRIBERY CONVICTIONS**

**I FURTHER AFFIRM THAT:**

Neither I, nor to the best of my knowledge, information, and belief, the above business (as is defined in Section 16-101(b) of the State Finance and Procurement Article of the Annotated Code of Maryland), or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies has been convicted of, or has had probation before judgment imposed pursuant to Criminal Procedure Article, §6-220, Annotated Code of Maryland, or has pleaded nolo contendere to a charge of, bribery, attempted bribery, or conspiracy to bribe in violation of Maryland law, or of the law of any other state or federal law, except as follows (indicate the reasons why the affirmation cannot be given and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of person(s) involved, and their current positions and responsibilities with the business):

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**D. AFFIRMATION REGARDING OTHER CONVICTIONS**

**I FURTHER AFFIRM THAT:**

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies, has:

- (1) Been convicted under state or federal statute of:
  - (a) A criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract; or
  - (b) Fraud, embezzlement, theft, forgery, falsification or destruction of records or receiving stolen property;
- (2) Been convicted of any criminal violation of a state or federal antitrust statute;
- (3) Been convicted under the provisions of Title 18 of the United States Code for violation of the Racketeer Influenced and Corrupt Organization Act, 18 U.S.C. §1961 et seq., or the Mail Fraud Act, 18 U.S.C. §1341 et seq., for acts in connection with the submission of bids or proposals for a public or private contract;
- (4) Been convicted of a violation of the State Minority Business Enterprise Law, §14-308 of the State Finance and Procurement Article of the Annotated Code of Maryland;
- (5) Been convicted of a violation of §11-205.1 of the State Finance and Procurement Article of the Annotated Code of Maryland;
- (6) Been convicted of conspiracy to commit any act or omission that would constitute grounds for conviction or liability under any law or statute described in subsections (1)—(5) above;
- (7) Been found civilly liable under a state or federal antitrust statute for acts or omissions in connection with the submission of bids or proposals for a public or private contract;
- (8) Been found in a final adjudicated decision to have violated the Commercial Nondiscrimination Policy under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland with regard to a public or private contract; or
- (9) Admitted in writing or under oath, during the course of an official investigation or other proceedings, acts or omissions that would constitute grounds for conviction or liability under any law or statute described in §§B and C and subsections D(1)—(8) above, except as follows (indicate reasons why the affirmations cannot be given, and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of the person(s) involved and their current positions and responsibilities with the business, and the status of any debarment):

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**E. AFFIRMATION REGARDING DEBARMENT**

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities, including obtaining or performing contracts with public bodies, has ever been suspended or debarred (including being issued a limited

denial of participation) by any public entity, except as follows (list each debarment or suspension providing the dates of the suspension or debarment, the name of the public entity and the status of the proceedings, the name(s) of the person(s) involved and their current positions and responsibilities with the business, the grounds of the debarment or suspension, and the details of each person's involvement in any activity that formed the grounds of the debarment or suspension).

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**F. AFFIRMATION REGARDING DEBARMENT OF RELATED ENTITIES**

**I FURTHER AFFIRM THAT:**

(1) The business was not established and it does not operate in a manner designed to evade the application of or defeat the purpose of debarment pursuant to Sections 16-101, et seq., of the State Finance and Procurement Article of the Annotated Code of Maryland; and

(2) The business is not a successor, assignee, subsidiary, or affiliate of a suspended or debarred business, except as follows (you must indicate the reasons why the affirmations cannot be given without qualification):

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**G. SUB-CONTRACT AFFIRMATION**

**I FURTHER AFFIRM THAT:**

Neither I, nor to the best of my knowledge, information, and belief, the above business, has knowingly entered into a contract with a public body under which a person debarred or suspended under Title 16 of the State Finance and Procurement Article of the Annotated Code of Maryland will provide, directly or indirectly, supplies, services, architectural services, construction related services, leases of real property, or construction.

**H. AFFIRMATION REGARDING COLLUSION**

**I FURTHER AFFIRM THAT:**

Neither I, nor to the best of my knowledge, information, and belief, the above business has:

(1) Agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the accompanying bid or offer that is being submitted;

(2) In any manner, directly or indirectly, entered into any agreement of any kind to fix the bid price or price proposal of the bidder or offeror or of any competitor, or otherwise taken any action in restraint of free competitive bidding in connection with the contract for which the accompanying bid or offer is submitted.

**I. CERTIFICATION OF TAX PAYMENT**

I FURTHER AFFIRM THAT: Except as validly contested, the business has paid, or has arranged for payment of, all taxes due the State of Maryland and has filed all required returns and reports with the Comptroller of the Treasury, the State Department of Assessments and Taxation, and the Department of Labor, Licensing, and Regulation, as applicable, and will have paid all withholding taxes due the State of Maryland prior to final settlement.

**J. CONTINGENT FEES**

I FURTHER AFFIRM THAT:

The business has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency working for the business, to solicit or secure the Contract, and that the business has not paid or agreed to pay any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency, any fee or any other consideration contingent on the making of the Contract.

**K. CERTIFICATION REGARDING INVESTMENTS IN IRAN**

(1) The undersigned certifies that, in accordance with State Finance and Procurement Article, §17-705, Annotated Code of Maryland:

(a) It is not identified on the list created by the Board of Public Works as a person engaging in investment activities in Iran as described in State Finance and Procurement Article, §17-702, Annotated Code of Maryland; and

(b) It is not engaging in investment activities in Iran as described in State Finance and Procurement Article, §17-702, Annotated Code of Maryland.

2. The undersigned is unable to make the above certification regarding its investment activities in Iran due to the following activities: \_\_\_\_\_

**L. CONFLICT MINERALS ORIGINATED IN THE DEMOCRATIC REPUBLIC OF CONGO (FOR SUPPLIES AND SERVICES CONTRACTS)**

I FURTHER AFFIRM THAT:

The business has complied with the provisions of State Finance and Procurement Article, §14-413, Annotated Code of Maryland governing proper disclosure of certain information regarding conflict minerals originating in the Democratic Republic of Congo or its neighboring countries as required by federal law.

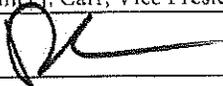
**M. ACKNOWLEDGEMENT**

I ACKNOWLEDGE THAT this Affidavit is to be furnished to the Procurement Officer and may be distributed to units of: (1) the State of Maryland; (2) counties or other subdivisions of the State of Maryland; (3) other states; and (4) the federal government. I further acknowledge that this Affidavit is subject to applicable laws of the United States and the State of Maryland, both criminal and civil, and that nothing in this Affidavit or any contract resulting from the submission of this bid or proposal shall be construed to supersede, amend, modify or waive, on behalf of the State of Maryland, or any unit of the State of Maryland having jurisdiction, the exercise of any statutory right or remedy conferred by the Constitution and the laws of Maryland with respect to any misrepresentation made or any violation of the obligations, terms and covenants undertaken by the above business with respect to (1) this Affidavit, (2) the contract, and (3) other Affidavits comprising part of the contract.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date: May 09, 2018

By: Daniel J. Carr, Vice President (print name of Authorized Representative and Affiant)

 (signature of Authorized Representative and Affiant)

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**ATTACHMENT 6 CONFLICT OF INTEREST AFFIDAVIT AND DISCLOSURE**

- A) "Conflict of interest" means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the State, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage.
- B) "Person" has the meaning stated in COMAR 21.01.02.01B(64) and includes a bidder, offeror, contractor, consultant, or subcontractor or sub-consultant at any tier, and also includes an employee or agent of any of them if the employee or agent has or will have the authority to control or supervise all or a portion of the work for which a bid or offer is made.
- C) The bidder or offeror warrants that, except as disclosed in §D, below, there are no relevant facts or circumstances now giving rise or which could, in the future, give rise to a conflict of interest.
- D) The following facts or circumstances give rise or could in the future give rise to a conflict of interest (explain in detail—attach additional sheets if necessary):
- E) The bidder or offeror agrees that if an actual or potential conflict of interest arises after the date of this affidavit, the bidder or offeror shall immediately make a full disclosure in writing to the procurement officer of all relevant facts and circumstances. This disclosure shall include a description of actions which the bidder or offeror has taken and proposes to take to avoid, mitigate, or neutralize the actual or potential conflict of interest. If the contract has been awarded and performance of the contract has begun, the Contractor shall continue performance until notified by the procurement officer of any contrary action to be taken.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date: May 09, 2018

By: 

(Authorized Representative and Affiant)

**Daniel J. Carr**  
**VP, Sales Operations**

SUBMIT AS INSTRUCTED IN RFP.

**ATTACHMENT 9 LIVING WAGE AFFIDAVIT OF AGREEMENT**

Contract No. TBD  
Name of Contractor Comcast Business Communications, LLC  
Address One Comcast Center  
City Philadelphia, State PA Zip Code 19103

**If the Contract is Exempt from the Living Wage Law**

The Undersigned, being an authorized representative of the above named Contractor, hereby affirms that the Contract is exempt from Maryland's Living Wage Law for the following reasons: (check all that apply)

- Bidder/Offeror is a nonprofit organization
- Bidder/Offeror is a public service company
- Bidder/Offeror employs 10 or fewer employees and the proposed contract value is less than \$500,000
- Bidder/Offeror employs more than 10 employees and the proposed contract value is less than \$100,000

**If the Contract is a Living Wage Contract**

A. The Undersigned, being an authorized representative of the above named Contractor, hereby affirms our commitment to comply with Title 18, State Finance and Procurement Article, Annotated Code of Maryland and, if required, to submit all payroll reports to the Commissioner of Labor and Industry with regard to the above stated contract. The Bidder/Offeror agrees to pay covered employees who are subject to living wage at least the living wage rate in effect at the time service is provided for hours spent on State contract activities, and to ensure that its Subcontractors who are not exempt also pay the required living wage rate to their covered employees who are subject to the living wage for hours spent on a State contract for services. The Contractor agrees to comply with, and ensure its Subcontractors comply with, the rate requirements during the initial term of the contract and all subsequent renewal periods, including any increases in the wage rate established by the Commissioner of Labor and Industry, automatically upon the effective date of the revised wage rate.

B. \_\_\_\_\_ (initial here if applicable) The Bidder/Offeror affirms it has no covered employees for the following reasons (check all that apply):

- All employee(s) proposed to work on the State contract will spend less than one-half of the employee's time during every work week on the State contract;
- All employee(s) proposed to work on the State contract will be 17 years of age or younger during the duration of the State contract; or
- All employee(s) proposed to work on the State contract will work less than 13 consecutive weeks on the State contract.

The Commissioner of Labor and Industry reserves the right to request payroll records and other data that the Commissioner deems sufficient to confirm these affirmations at any time.

Name of Authorized Representative: Daniel J. Carr

Signature of Authorized Representative: 

Date: 05/09/2018 Title: Vice President

Witness Name (Typed or Printed): Julio C. Paternostru

Witness Signature & Date: Julio C. Paternostru 05/09/2018

**Account Number**  
908978521

**Invoice Number**  
55124853

**Bill Date**  
Apr 1, 2018

**Customer Service**  
1-888-262-7300

| Previous Balance | Payments | Adjustments | Past Due Amount | Current Amount | Total Amount Due     |
|------------------|----------|-------------|-----------------|----------------|----------------------|
| 0.00             | 0.00     | 0.00        | 0.00            | 185,056.08     | <b>\$ 185,056.08</b> |

Comcast Sample - SR014410164  
9 State Circle  
Annapolis, MD 21401

**Payment Due Date**  
**May 1, 2018**

**Late Payment Charge**  
**\$ 0.00**

**SUMMARY OF CHARGES AND CREDITS ( Billing activity up to and including Mar 31, 2018 )**

|                            |                      |
|----------------------------|----------------------|
| Recurring Charges          | 172,900.50           |
| Other Charges and Credits  | 10,500.00            |
| Total Customer Charges     | 183,400.50           |
| Total Taxes and Surcharges | 1,655.58             |
| Current Amount             | 185,056.08           |
| Past Due Amount            | 0.00                 |
| <b>Total Amount Due</b>    | <b>\$ 185,056.08</b> |

Congratulations on choosing Comcast to fulfill your company's communications needs. Now you can move your business into high gear, with the assurance of fast, reliable communications. And, you'll enjoy the Comcast style of superior customer service--responding to your needs will always be top priority. If you have questions about your new account, please call us at the number above. We look forward to serving you. Thank you again for your business.  
**Pay your invoice online by visiting [www.comcastpaymentcenter.com](http://www.comcastpaymentcenter.com)**

**BILLING SIMULATION DISCLAIMER:**

At this time, Comcast can only simulate how your charges, taxes and surcharges could appear on an actual invoice; the rates used are based on our current taxation software and are subject to change without notification. This content should be used as informational only and is not binding.

*If paying by mail, please return this section with your payment*

**Account Number**  
908978521

**Invoice Number**  
55124853

**Payment Due Date**  
May 1, 2018

**Total Amount Due**  
\$ 185,056.08

**Amount Enclosed**

(For further information on how to pay please turn over)

Comcast Sample - SR014410164  
9 State Circle  
Annapolis, MD 21401

Comcast  
PO Box 37601  
Philadelphia, PA 19101-0601

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## How to Pay

### Paying by Mail

Please detach the payment slip and return it together with your check or money order payable to Comcast in the envelope provided. Make sure to fill in the check details on the reverse side of the payment slip.

### Paying by Credit Card

Credit Card payments are available by American Express, Visa or Master Card.

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## Change in Customer Details?

For any change in customer details, including address, billing arrangements, or reporting requirements, please let us know by calling 1-888-262-7300.

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**Business Voice and Trunk Services are provided by Comcast IP Phone, LLC.**

**Any issues with these services can be addressed by contacting us at (877) 543-3961**

**Unless noted otherwise in the Service Details section of this bill, all other services on this bill are provided by Comcast Business Communications, LLC.**

On a quarterly basis, the Federal Communications Commission (FCC) modifies the contribution rate that voice service providers pay into the federal Universal Service Fund (USF). The USF supports funding for telecom services to eligible schools, libraries and rural health care facilities. If you subscribe to the Company's interstate and/or international services or data network services, a Universal Connectivity Charge (UCC) is assessed on such services. The UCC equals the FCC's approved contribution rate. FCC contribution rates may be accessed at: [www.fcc.gov/omd/contribution-factor.html](http://www.fcc.gov/omd/contribution-factor.html)  
**Effective 4/01/2018, the rate has decreased from 19.5% to 18.4%.**

# Account Statement

At Comcast, we will continue to look to the future and the provision of new communications technology, new opportunities, and more choices, providing people with the communications products and services that connect them to what's important in their lives. If you have any questions about your voice, data or fiber-based services, please call us at the number seen on the top of page 1.

Will your business soon be moving to a new location? If so, please be sure to notify us at least 60 calendar days in advance of your relocation in order to avoid service interruptions. Call us and we'll assist you with any changes or updates to your account.

## Location Summary

| Customer                         | Account No | Reference ID | Charges   | Subtotal          |
|----------------------------------|------------|--------------|-----------|-------------------|
| Comcast Sample - SR014410164     | 908978521  |              | 0.00      | 0.00              |
| Option 1 - ENS 10/100 100mb EVC  | 908978523  |              | 2,038.98  | 2,038.98          |
| Option 2 - ENS 100 Gig 10000 EVC | 908978525  |              | 82,395.60 | 82,395.60         |
| Option 3 - EDI 10/100 100mb EVC  | 908978527  |              | 1,921.50  | 1,921.50          |
| Option 4 EDI 100Gig 10000 EVC    | 908978529  |              | 98,700.00 | 98,700.00         |
| <b>Total Charges</b>             |            |              |           | <b>185,056.08</b> |

# Account Statement

## Location Breakdown Summary

| Location | Charges | Subtotal |
|----------|---------|----------|
|----------|---------|----------|

### Monthly Charges:

|                                |           |  |
|--------------------------------|-----------|--|
| Option 1 ENS 10100 100mb EVC   | 1,499.00  |  |
| Option 2 ENS 100 Gig 10000 EVC | 70,780.00 |  |
| Option 3 EDI 10100 100mb EVC   | 1,921.50  |  |
| Option 4 EDI 100Gig 10000 EVC  | 98,700.00 |  |

|                              |  |                   |
|------------------------------|--|-------------------|
| <b>Total Monthly Charges</b> |  | <b>172,900.50</b> |
|------------------------------|--|-------------------|

### Other Charges and Credits:

#### Non Recurring Charges:

|                                |           |  |
|--------------------------------|-----------|--|
| Option 1 ENS 10100 100mb EVC   | 500.00    |  |
| Option 2 ENS 100 Gig 10000 EVC | 10,000.00 |  |

|                                    |  |                  |
|------------------------------------|--|------------------|
| <b>Total Non Recurring Charges</b> |  | <b>10,500.00</b> |
|------------------------------------|--|------------------|

#### Taxes:

|                                |          |  |
|--------------------------------|----------|--|
| Option 1 ENS 10100 100mb EVC   | 39.98    |  |
| Option 2 ENS 100 Gig 10000 EVC | 1,615.60 |  |

|                    |  |                 |
|--------------------|--|-----------------|
| <b>Total Taxes</b> |  | <b>1,655.58</b> |
|--------------------|--|-----------------|

### Total Other Charges and Credits:

|  |  |                  |
|--|--|------------------|
|  |  | <b>12,155.58</b> |
|--|--|------------------|

### Total Charges Per Location:

|                                |           |  |
|--------------------------------|-----------|--|
| Option 1 ENS 10100 100mb EVC   | 2,038.98  |  |
| Option 2 ENS 100 Gig 10000 EVC | 82,395.60 |  |
| Option 3 EDI 10100 100mb EVC   | 1,921.50  |  |
| Option 4 EDI 100Gig 10000 EVC  | 98,700.00 |  |

|                             |  |                   |
|-----------------------------|--|-------------------|
| <b>Total Current Amount</b> |  | <b>185,056.08</b> |
|-----------------------------|--|-------------------|

|                       |  |
|-----------------------|--|
| <b>Location:</b>      | Option 1 - ENS 10/100 100mb EVC<br>Option 1 ENS 10100 100mb EVC<br>9 State Circle<br>Annapolis, MD 21401 |
| <b>Total Charges:</b> | 1,999.00   |

## Summary of Charges

|  |          |
|--|----------|
| <b>Local Billing Reference Number:</b> |          |
| <b>Recurring Charges</b>               | 1,499.00 |
| <b>Other Charges and Credits</b>       |          |
| Non-Recurring Charges                  | 500.00   |
| <b>Total Other Charges and Credits</b> | 500.00   |
| <b>Total Customer Charges</b>          | 1,999.00 |

## Taxes, Surcharges, and Fees

### Important Message

Regulatory Recovery Fees (RRFs) are Comcast service charges imposed on voice and certain other services to recover Comcast's contributions for federal, state and municipal regulatory programs and assessments, including, without limitation, universal service. RRFs are neither government mandated nor taxes or fees imposed on you by the government, but are amounts that Comcast retains. The fees may vary based on service usage patterns and program surcharge rates, and may change over time.

|                                       |       |
|---------------------------------------|-------|
| <b>Regulatory Recovery Fees</b>       |       |
| Statutory Gross Receipts Tax (State)  | 39.98 |
| <b>Total Regulatory Recovery Fees</b> | 39.98 |
| <b>Total Taxes and Surcharges</b>     | 39.98 |

## Service Summary

|                                       |          |
|---------------------------------------|----------|
| <b>Ethernet Network Service</b>       |          |
| Recurring Charges                     | 1,499.00 |
| Non-recurring Charges                 | 500.00   |
| <b>Total Ethernet Network Service</b> | 1,999.00 |
| <b>Total Charges</b>                  | 1,999.00 |

## Service Details

### Ethernet Network Service : 99.VLXM.002747..CBCL..

Ethernet Services (Excluding Internet Service) are provided by Comcast Phone of Northern Maryland, LLC

Location A: Option 1 ENS 10100 100mb EVC, 9 State Circle, Annapolis, MD

### Summary of Charges

|                              |          |
|------------------------------|----------|
| <b>Service Charges</b>       |          |
| Recurring Charges            | 1,499.00 |
| Non-recurring Charges        | 500.00   |
| <b>Total Service Charges</b> | 1,999.00 |
| <b>Total Charges</b>         | 1,999.00 |

### Recurring Charges

| Description                                       | Date Range              | Amount |
|---|-------------------------|--------|
| Intrastate Port - 99.KSMP.002868..CBCL.. - 10/100 | Apr 1, 18 to Apr 30, 18 | 165.00 |

**Service Details for Option 1 - ENS 10/100 100mb EVC**

**Ethernet Network Service : 99.VLXM.002747..CBCL.. continued**

Ethernet Services (Excluding Internet Service) are provided by Comcast Phone of Northern Maryland, LLC

**Location A: Option 1 ENS 10/100 100mb EVC, 9 State Circle, Annapolis, MD**

**Recurring Charges**

| Description   | Date Range              | Amount          |
|---|-------------------------|-----------------|
| Metro Bandwidth - 99.VLXM.002747..CBCL.. - 100 Mbps - Basic CoS | Apr 1, 18 to Apr 30, 18 | 1,334.00        |
| <b>Total Recurring Charges</b>                                  |                         | <b>1,499.00</b> |

**Non Recurring Charges**

| Description   | Date       | Amount        |
|---|------------|---------------|
| Intrastate Port - 99.KSMP.002868..CBCL.. - 10/100               | Apr 01, 18 | 500.00        |
| Metro Bandwidth - 99.VLXM.002747..CBCL.. - 100 Mbps - Basic CoS | Apr 01, 18 | No Charge     |
| <b>Total Non Recurring Charges</b>                              |            | <b>500.00</b> |

**Location:** Option 2 - ENS 100 Gig 10000 EVC  
 Option 2 ENS 100 Gig 10000 EVC  
 9 State Circle  
 Annapolis, MD 21401

**Total Charges:** 80,780.00

### Summary of Charges

|  |           |
|--|-----------|
| <b>Local Billing Reference Number:</b> |           |
| <b>Recurring Charges</b>               | 70,780.00 |
| <b>Other Charges and Credits</b>       |           |
| Non-Recurring Charges                  | 10,000.00 |
| <b>Total Other Charges and Credits</b> | 10,000.00 |
| <b>Total Customer Charges</b>          | 80,780.00 |

### Taxes, Surcharges, and Fees

**Important Message**

Regulatory Recovery Fees (RRFs) are Comcast service charges imposed on voice and certain other services to recover Comcast's contributions for federal, state and municipal regulatory programs and assessments, including, without limitation, universal service. RRFs are neither government mandated nor taxes or fees imposed on you by the government, but are amounts that Comcast retains. The fees may vary based on service usage patterns and program surcharge rates, and may change over time.

|                                       |          |
|---------------------------------------|----------|
| <b>Regulatory Recovery Fees</b>       |          |
| Statutory Gross Receipts Tax (State)  | 1,615.60 |
| <b>Total Regulatory Recovery Fees</b> | 1,615.60 |
| <b>Total Taxes and Surcharges</b>     | 1,615.60 |

### Service Summary

|                                       |           |
|---------------------------------------|-----------|
| <b>Ethernet Network Service</b>       |           |
| Recurring Charges                     | 70,780.00 |
| Non-recurring Charges                 | 10,000.00 |
| <b>Total Ethernet Network Service</b> | 80,780.00 |
| <b>Total Charges</b>                  | 80,780.00 |

### Service Details

**Ethernet Network Service : 99.VLXM.002748..CBCL..**

Ethernet Services (Excluding Internet Service) are provided by Comcast Phone of Northern Maryland, LLC

**Location A:** Option 2 ENS 100 Gig 10000 EVC, 9 State Circle, Annapolis, MD

**Summary of Charges**

|                              |           |
|------------------------------|-----------|
| <b>Service Charges</b>       |           |
| Recurring Charges            | 70,780.00 |
| Non-recurring Charges        | 10,000.00 |
| <b>Total Service Charges</b> | 80,780.00 |
| <b>Total Charges</b>         | 80,780.00 |

**Recurring Charges**

| Description  | Date Range              | Amount   |
|--|-------------------------|----------|
| Intrastate Port - 99.KSMP.002869..CBCL.. - 100 Gig E | Apr 1, 18 to Apr 30, 18 | 9,000.00 |

### Service Details for Option 2 - ENS 100 Gig 10000 EVC

#### Ethernet Network Service : 99.VLXM.002748..CBCL.. continued

Ethernet Services (Excluding Internet Service) are provided by Comcast Phone of Northern Maryland, LLC

**Location A: Option 2 ENS 100 Gig 10000 EVC, 9 State Circle, Annapolis, MD**

#### Recurring Charges

| Description   | Date Range              | Amount           |
|---|-------------------------|------------------|
| Metro Bandwidth - 99.VLXM.002748..CBCL.. - 10000 Mbps - Basic CoS | Apr 1, 18 to Apr 30, 18 | 61,780.00        |
| <b>Total Recurring Charges</b>                                    |                         | <b>70,780.00</b> |

#### Non Recurring Charges

| Description   | Date       | Amount           |
|---|------------|------------------|
| Intrastate Port - 99.KSMP.002869..CBCL.. - 100 Gig E              | Apr 01, 18 | 10,000.00        |
| Metro Bandwidth - 99.VLXM.002748..CBCL.. - 10000 Mbps - Basic CoS | Apr 01, 18 | No Charge        |
| <b>Total Non Recurring Charges</b>                                |            | <b>10,000.00</b> |

|                       |  |
|-----------------------|--|
| <b>Location:</b>      | Option 3 - EDI 10/100 100mb EVC<br>Option 3 EDI 10100 100mb EVC<br>9 State Circle<br>Annapolis, MD 21401 |
| <b>Total Charges:</b> | 1,921.50   |

### Summary of Charges

Local Billing Reference Number:

|                               |                 |
|-------------------------------|-----------------|
| Recurring Charges             | 1,921.50        |
| <b>Total Customer Charges</b> | <b>1,921.50</b> |

### Service Summary

|  |                 |
|--|-----------------|
| Ethernet Dedicated Internet              |                 |
| Recurring Charges                        | 1,921.50        |
| <b>Total Ethernet Dedicated Internet</b> | <b>1,921.50</b> |
| <b>Total Charges</b>                     | <b>1,921.50</b> |

### Service Details

**Ethernet Dedicated Internet : 99.VLXM.002749..CBCL..**

Location A: Option 3 EDI 10100 100mb EVC, 9 State Circle, Annapolis, MD

#### Summary of Charges

|                              |                 |
|------------------------------|-----------------|
| Service Charges              |                 |
| Recurring Charges            | 1,921.50        |
| <b>Total Service Charges</b> | <b>1,921.50</b> |
| <b>Total Charges</b>         | <b>1,921.50</b> |

#### Recurring Charges

| Description                                   | Date Range              | Amount          |
|---|-------------------------|-----------------|
| Port - 99.KSMP.002870..CBCL.. - 10/100        | Apr 1, 18 to Apr 30, 18 |                 |
| Bandwidth - 99.VLXM.002749..CBCL.. - 100 Mbps | Apr 1, 18 to Apr 30, 18 | 1,921.50        |
| <b>Total Recurring Charges</b>                |                         | <b>1,921.50</b> |

#### Non Recurring Charges

| Description                                   | Date       | Amount      |
|---|------------|-------------|
| Port - 99.KSMP.002870..CBCL.. - 10/100        | Apr 01, 18 |             |
| Bandwidth - 99.VLXM.002749..CBCL.. - 100 Mbps | Apr 01, 18 | No Charge   |
| <b>Total Non Recurring Charges</b>            |            | <b>0.00</b> |

Billings  
Simulation

|                       |   |
|-----------------------|---|
| <b>Location:</b>      | Option 4 EDI 100Gig 10000 EVC<br>Option 4 EDI 100Gig 10000 EVC<br>9 State Circle<br>Annapolis, MD 21401 |
| <b>Total Charges:</b> | 98,700.00   |

### Summary of Charges

|  |                  |
|--|------------------|
| <b>Local Billing Reference Number:</b> |                  |
| Recurring Charges                      | 98,700.00        |
| <b>Total Customer Charges</b>          | <b>98,700.00</b> |

### Service Summary

|  |                  |
|--|------------------|
| <b>Ethernet Dedicated Internet</b>       |                  |
| Recurring Charges                        | 98,700.00        |
| <b>Total Ethernet Dedicated Internet</b> | <b>98,700.00</b> |
| <b>Total Charges</b>                     | <b>98,700.00</b> |

### Service Details

**Ethernet Dedicated Internet : 99.VLXM.002750..CBCL..**

Location A: Option 4 EDI 100Gig 10000 EVC, 9 State Circle, Annapolis, MD

**Summary of Charges**

|                              |                  |
|------------------------------|------------------|
| <b>Service Charges</b>       |                  |
| Recurring Charges            | 98,700.00        |
| <b>Total Service Charges</b> | <b>98,700.00</b> |
| <b>Total Charges</b>         | <b>98,700.00</b> |

**Recurring Charges**

| Description                                     | Date Range              | Amount           |
|---|-------------------------|------------------|
| Port - 99.KSMP.002871..CBCL.. - 100 Gig E       | Apr 1, 18 to Apr 30, 18 |                  |
| Bandwidth - 99.VLXM.002750..CBCL.. - 10000 Mbps | Apr 1, 18 to Apr 30, 18 | 98,700.00        |
| <b>Total Recurring Charges</b>                  |                         | <b>98,700.00</b> |

**Non Recurring Charges**

| Description                                     | Date       | Amount      |
|---|------------|-------------|
| Port - 99.KSMP.002871..CBCL.. - 100 Gig E       | Apr 01, 18 |             |
| Bandwidth - 99.VLXM.002750..CBCL.. - 10000 Mbps | Apr 01, 18 | No Charge   |
| <b>Total Non Recurring Charges</b>              |            | <b>0.00</b> |

Exhibit L

FINANCIAL PROPOSAL

*See attachment entitled "Exhibit L – Financial Proposal"*

# NETWORK SERVICE PROPOSAL

State of Maryland

**Financial Proposal Volume II**

Data Telecommunications Services –  
Expansion Window #1, RFP #F50B4400028  
April 24th, 2018

John Stinebaugh

Strategic Enterprise Account Executive

8031 Corporate Dr.

Baltimore, Maryland 21236

410-513-0472

[john\\_stinebaugh@comcast.com](mailto:john_stinebaugh@comcast.com)



**COMCAST  
BUSINESS**

OUTMANEUVER

# COMCAST BUSINESS

## Financial Proposal

Pricing proposed for FAIII and FA IV. Please reference pricing spreadsheets provided.

PRICING PROPOSAL FORM

FUNCTIONAL AREA IV (Commodity Internet Service Delivery)

| DESCRIPTION                                      | COST PER MONTH | TAXES / FEES* | TOTAL MRC    | NRC                         | ONE - TIME COST TO EXTEND DEMARC | TRANSPORT MEDIUM             | HAND-OFF OPTIONS                      |
|--|----------------|---------------|--------------|-----------------------------|----------------------------------|------------------------------|---------------------------------------|
| <b>ETHERNET DEDICATED INTERNET SERVICE (EDI)</b> |                |               |              |                             |                                  |                              |                                       |
| EDI - Bandwidth 1 Mbps                           | \$ 161.70      | 0%            | \$ 161.70    | SEE NETWORK INTERFACE COSTS | \$0.00                           | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth 2 Mbps                           | \$ 238.70      | 0%            | \$ 238.70    | SEE NETWORK INTERFACE COSTS | \$0.00                           | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth 3 Mbps                           | \$ 315.70      | 0%            | \$ 315.70    | SEE NETWORK INTERFACE COSTS | \$0.00                           | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth 4 Mbps                           | \$ 392.70      | 0%            | \$ 392.70    | SEE NETWORK INTERFACE COSTS | \$0.00                           | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth 5 Mbps                           | \$ 469.70      | 0%            | \$ 469.70    | SEE NETWORK INTERFACE COSTS | \$0.00                           | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth 6 Mbps                           | \$ 546.70      | 0%            | \$ 546.70    | SEE NETWORK INTERFACE COSTS | \$0.00                           | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth 7 Mbps                           | \$ 623.70      | 0%            | \$ 623.70    | SEE NETWORK INTERFACE COSTS | \$0.00                           | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth 8 Mbps                           | \$ 697.20      | 0%            | \$ 697.20    | SEE NETWORK INTERFACE COSTS | \$0.00                           | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth 9 Mbps                           | \$ 770.00      | 0%            | \$ 770.00    | SEE NETWORK INTERFACE COSTS | \$0.00                           | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth 10 Mbps                          | \$ 843.50      | 0%            | \$ 843.50    | SEE NETWORK INTERFACE COSTS | \$0.00                           | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth 11 Mbps                          | \$ 856.80      | 0%            | \$ 856.80    | SEE NETWORK INTERFACE COSTS | \$0.00                           | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth 13 Mbps                          | \$ 884.80      | 0%            | \$ 884.80    | SEE NETWORK INTERFACE COSTS | \$0.00                           | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth 15 Mbps                          | \$ 912.80      | 0%            | \$ 912.80    | SEE NETWORK INTERFACE COSTS | \$0.00                           | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth 20 Mbps                          | \$ 982.10      | 0%            | \$ 982.10    | SEE NETWORK INTERFACE COSTS | \$0.00                           | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth 25 Mbps                          | \$ 1,047.20    | 0%            | \$ 1,047.20  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 30 Mbps                          | \$ 1,113.00    | 0%            | \$ 1,113.00  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 40 Mbps                          | \$ 1,239.70    | 0%            | \$ 1,239.70  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 50 Mbps                          | \$ 1,362.90    | 0%            | \$ 1,362.90  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 60 Mbps                          | \$ 1,482.60    | 0%            | \$ 1,482.60  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 70 Mbps                          | \$ 1,598.10    | 0%            | \$ 1,598.10  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 80 Mbps                          | \$ 1,709.40    | 0%            | \$ 1,709.40  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 90 Mbps                          | \$ 1,817.20    | 0%            | \$ 1,817.20  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 100 Mbps                         | \$ 1,921.50    | 0%            | \$ 1,921.50  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 200 Mbps                         | \$ 2,730.00    | 0%            | \$ 2,730.00  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 300 Mbps                         | \$ 3,461.50    | 0%            | \$ 3,461.50  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 400 Mbps                         | \$ 4,116.00    | 0%            | \$ 4,116.00  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 500 Mbps                         | \$ 4,712.40    | 0%            | \$ 4,712.40  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 600 Mbps                         | \$ 5,251.40    | 0%            | \$ 5,251.40  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 700 Mbps                         | \$ 5,733.00    | 0%            | \$ 5,733.00  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 800 Mbps                         | \$ 6,156.50    | 0%            | \$ 6,156.50  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 900 Mbps                         | \$ 6,541.50    | 0%            | \$ 6,541.50  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 1000 Mbps                        | \$ 6,888.00    | 0%            | \$ 6,888.00  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 2000 Mbps                        | \$ 9,236.50    | 0%            | \$ 9,236.50  | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 3000 Mbps                        | \$ 11,469.50   | 0%            | \$ 11,469.50 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 4000 Mbps                        | \$ 13,587.00   | 0%            | \$ 13,587.00 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 5000 Mbps                        | \$ 15,627.50   | 0%            | \$ 15,627.50 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 6000 Mbps                        | \$ 17,591.00   | 0%            | \$ 17,591.00 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 7000 Mbps                        | \$ 19,477.50   | 0%            | \$ 19,477.50 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 8000 Mbps                        | \$ 21,287.00   | 0%            | \$ 21,287.00 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 9000 Mbps                        | \$ 23,019.50   | 0%            | \$ 23,019.50 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 10000 Mbps                       | \$ 24,675.00   | 0%            | \$ 24,675.00 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 20000 Mbps                       | \$ 32,892.30   | 0%            | \$ 32,892.30 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 30000 Mbps                       | \$ 41,108.90   | 0%            | \$ 41,108.90 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 40000 Mbps                       | \$ 49,325.50   | 0%            | \$ 49,325.50 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 50000 Mbps                       | \$ 57,567.30   | 0%            | \$ 57,567.30 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 60000 Mbps                       | \$ 65,783.90   | 0%            | \$ 65,783.90 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 70000 Mbps                       | \$ 74,000.50   | 0%            | \$ 74,000.50 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 80000 Mbps                       | \$ 82,242.30   | 0%            | \$ 82,242.30 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 90000 Mbps                       | \$ 90,458.90   | 0%            | \$ 90,458.90 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Bandwidth 100000 Mbps                      | \$ 98,700.00   | 0%            | \$ 98,700.00 | SEE NETWORK INTERFACE COSTS | \$0.00                           | FIBER                        |                                       |
| EDI - Network Interface - 10 / 100               | Port \$0.00    | \$0.00        | \$0.00       | \$1,000.00                  | \$0                              |                              | COPPER ONLY                           |
| EDI - Network Interface - Gig E                  | Port \$0.00    | \$0.00        | \$0.00       | \$1,000.00                  | \$0                              |                              | COPPER OR FIBER (CUSTOMER PREFERENCE) |
| EDI - Network Interface - 10 Gig                 | Port \$0.00    | \$0.00        | \$0.00       | \$1,000.00                  | \$0                              |                              | FIBER ONLY                            |
| EDI - Network Interface - 100 Gig                | Port \$0.00    | \$0.00        | \$0.00       | \$1,000.00                  | \$0                              |                              | FIBER ONLY                            |
| Border Gateway Protocol                          | Setup \$0      | \$0           | \$0          | \$500.00                    |                                  |                              |                                       |

|  |   |           |            |    |     |          |     |
|--|---|-----------|------------|----|-----|----------|-----|
| IPv4 Static Address Block /20 (2)      | 1 | Static IP | \$20.00    | 3% | \$  | 20.03    | \$0 |
| IPv4 Static Address Block /29 (6)      | 1 | Static IP | \$25.00    | 3% | \$  | 25.03    | \$0 |
| IPv4 Static Address Block /28 (14)     | 1 | Static IP | \$30.00    | 3% | \$  | 30.03    | \$0 |
| IPv4 Static Address Block /27 (30)     | 1 | Static IP | \$50.00    | 3% | \$  | 50.03    | \$0 |
| IPv4 Static Address Block /26 (62)     | 1 | Static IP | \$75.00    | 3% | \$  | 75.03    | \$0 |
| IPv4 Static Address Block /25 (126)    | 1 | Static IP | \$100.00   | 3% | \$  | 100.03   | \$0 |
| IPv4 Static Address block /24 (254)    | 1 | Static IP | \$200.00   | 3% | \$  | 200.03   | \$0 |
| IPv4 Static Address Block /23 (510)    | 1 | Static IP | \$400.00   | 3% | \$  | 400.03   | \$0 |
| IPv4 Static Address Block /22 (1022)   | 1 | Static IP | \$800.00   | 3% | \$  | 800.03   | \$0 |
| IPv4 Static Address Block /21 (2046)   | 1 | Static IP | \$1,600.00 | 3% | \$  | 1,600.03 | \$0 |
| IPv4 Static Address Block /20 (4094)   | 1 | Static IP | \$3,200.00 | 3% | \$  | 3,200.03 | \$0 |
| IPv4 Static Address Block /19 (8190)   | 1 | Static IP | \$6,400.00 | 3% | \$  | 6,400.03 | \$0 |
| IPv6 Static Address Block /48 (65,536) | 1 | Static IP | ICB        | 3% | ICB |          | \$0 |

**DDOS MITIGATION (OPTIONAL)**

| One-Time Setup fee             |                 | \$1,800   |  |
|--------------------------------|-----------------|-----------|--|
| Service Options with 36 months |                 |           |  |
| EDI Bandwidth                  | Single Incident | Unlimited |  |
| 1 < BW ≤ 50                    | \$1,020         | \$2,550   |  |
| 50 < BW ≤ 100                  | \$1,700         | \$3,400   |  |
| 100 < BW ≤ 500                 | \$2,550         | \$4,250   |  |
| 500 < BW ≤ 1000                | \$3,400         | \$6,800   |  |
| 1000 < BW ≤ 5000               | \$4,250         | \$9,350   |  |
| 5000 < BW ≤ 10000              | \$5,100         | \$11,900  |  |

| For each additional mitigation for Single Incident subscribers |              |
|--|--------------|
| EDI Bandwidth Range (Mbps)                                     | Per Incident |
| 1 < BW ≤ 50  | \$720        |
| 50 < BW ≤ 100  | \$900        |
| 100 < BW ≤ 500   | \$1,080      |
| 500 < BW ≤ 1000  | \$1,440      |
| 1000 < BW ≤ 5000   | \$2,100      |
| 5000 < BW ≤ 10000  | \$2,700      |

- Single Incident: An incremental NRC charge applies beyond 1 mitigation incident in a monthly billing cycle
- A mitigation incident is a 24-hour time window in which Comcast provides customer with as many mitigations as needed

| DESCRIPTION                          | COST PER MONTH | TAXES / FEES | MRC      | NRC | ONE TIME COST - EXTEND DEMARC | TRANSPORT MEDIUM | HAND-OFF OPTIONS |  |
|--------------------------------------|----------------|--------------|----------|-----|-------------------------------|------------------|------------------|--|
| <b>BUSINESS INTERNET</b>             |                |              |          |     |                               |                  |                  |  |
|                                      | UPLOAD         | DOWNLOAD     |          |     |                               |                  |                  |  |
| DOCSIS - BROADBAND                   | 5              | 25           | 99.95    | \$0 | 99.95                         | \$199.00         | \$0.00           | ETHERNET (with option of WIRELESS ROUTER included) |
| DOCSIS - BROADBAND                   | 15             | 75           | \$149.95 | \$0 | \$149.95                      | \$199.00         | \$0.00           | ETHERNET (with option of WIRELESS ROUTER included) |
| DOCSIS - BROADBAND                   | 25             | 150          | \$249.95 | \$0 | \$249.95                      | \$199.00         | \$0.00           | ETHERNET (with option of WIRELESS ROUTER included) |
| DOCSIS - BROADBAND                   | 25             | 250          | \$349.95 | \$0 | \$349.95                      | \$199.00         | \$0.00           | ETHERNET (with option of WIRELESS ROUTER included) |
| DOCSIS - BROADBAND                   | 30             | 500          | \$399.95 | \$0 | \$399.95                      | \$199.00         | \$0.00           | ETHERNET (with option of WIRELESS ROUTER included) |
| DOCSIS - BROADBAND                   | 35             | 1000         | \$499.95 | \$0 | \$499.95                      | \$199.00         | \$0.00           | ETHERNET (with option of WIRELESS ROUTER included) |
| Modem / Equipment rental             |                |              | \$14.95  | 3%  | \$14.98                       |                  |                  |  |
| Optional Static IPs:                 |                |              |          |     |                               |                  |                  |  |
|                                      | 1              |              | \$19.95  | 3%  | \$19.98                       |                  |                  |  |
|                                      | 5              |              | \$24.95  | 3%  | \$24.98                       |                  |                  |  |
|                                      | 13             |              | \$39.95  | 3%  | \$39.98                       |                  |                  |  |
| CONNECTION PRO (ADD ON) 4GLTE BACKUP |                |              | \$29.95  | 3%  | \$29.98                       | \$0              | CELLULAR         |  |

PRICING PROPOSAL FORM

FUNCTIONAL AREA III - (all LATAS)

| DESCRIPTION                                 | COST PER MONTH | TAXES / FEES | TOTAL MRC    | NRC | ONE - TIME COST TO EXTEND DEMARC | TRANSPORT MEDIUM              | HAND-OFF OPTIONS                 |
|---|----------------|--------------|--------------|-----|----------------------------------|-------------------------------|----------------------------------|
| <b>ETHERNET NETWORK SERVICES (ENS) "ANY</b> |                |              |              |     |                                  |                               |                                  |
| <b>TO ANY" LAYER 2 - BASIC COS EVC</b>      |                |              |              |     |                                  |                               |                                  |
| ENS - Basic Network Bandwidth               | 1              | Mbps         | \$ 78.00     | 3%  | \$ 78.03                         | SEE NETWORK INTERFACE CHARGES | \$0 HYBRID FIBER - COAX or FIBER |
| ENS - Basic Network Bandwidth               | 2              | Mbps         | \$ 134.00    | 3%  | \$ 134.03                        | SEE NETWORK INTERFACE CHARGES | \$0 HYBRID FIBER - COAX or FIBER |
| ENS - Basic Network Bandwidth               | 3              | Mbps         | \$ 189.00    | 3%  | \$ 189.03                        | SEE NETWORK INTERFACE CHARGES | \$0 HYBRID FIBER - COAX or FIBER |
| ENS - Basic Network Bandwidth               | 4              | Mbps         | \$ 245.00    | 3%  | \$ 245.03                        | SEE NETWORK INTERFACE CHARGES | \$0 HYBRID FIBER - COAX or FIBER |
| ENS - Basic Network Bandwidth               | 5              | Mbps         | \$ 300.00    | 3%  | \$ 300.03                        | SEE NETWORK INTERFACE CHARGES | \$0 HYBRID FIBER - COAX or FIBER |
| ENS - Basic Network Bandwidth               | 6              | Mbps         | \$ 356.00    | 3%  | \$ 356.03                        | SEE NETWORK INTERFACE CHARGES | \$0 HYBRID FIBER - COAX or FIBER |
| ENS - Basic Network Bandwidth               | 7              | Mbps         | \$ 412.00    | 3%  | \$ 412.03                        | SEE NETWORK INTERFACE CHARGES | \$0 HYBRID FIBER - COAX or FIBER |
| ENS - Basic Network Bandwidth               | 8              | Mbps         | \$ 467.00    | 3%  | \$ 467.03                        | SEE NETWORK INTERFACE CHARGES | \$0 HYBRID FIBER - COAX or FIBER |
| ENS - Basic Network Bandwidth               | 9              | Mbps         | \$ 523.00    | 3%  | \$ 523.03                        | SEE NETWORK INTERFACE CHARGES | \$0 HYBRID FIBER - COAX or FIBER |
| ENS - Basic Network Bandwidth               | 10             | Mbps         | \$ 578.00    | 3%  | \$ 578.03                        | SEE NETWORK INTERFACE CHARGES | \$0 HYBRID FIBER - COAX or FIBER |
| ENS - Basic Network Bandwidth               | 11             | Mbps         | \$ 589.00    | 3%  | \$ 589.03                        | SEE NETWORK INTERFACE CHARGES | \$0 HYBRID FIBER - COAX or FIBER |
| ENS - Basic Network Bandwidth               | 13             | Mbps         | \$ 611.00    | 3%  | \$ 611.03                        | SEE NETWORK INTERFACE CHARGES | \$0 HYBRID FIBER - COAX or FIBER |
| ENS - Basic Network Bandwidth               | 15             | Mbps         | \$ 633.00    | 3%  | \$ 633.03                        | SEE NETWORK INTERFACE CHARGES | \$0 HYBRID FIBER - COAX or FIBER |
| ENS - Basic Network Bandwidth               | 20             | Mbps         | \$ 667.00    | 3%  | \$ 667.03                        | SEE NETWORK INTERFACE CHARGES | \$0 HYBRID FIBER - COAX or FIBER |
| ENS - Basic Network Bandwidth               | 25             | Mbps         | \$ 722.00    | 3%  | \$ 722.03                        | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 30             | Mbps         | \$ 745.00    | 3%  | \$ 745.03                        | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 40             | Mbps         | \$ 834.00    | 3%  | \$ 834.03                        | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 50             | Mbps         | \$ 912.00    | 3%  | \$ 912.03                        | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 60             | Mbps         | \$ 1,000.00  | 3%  | \$ 1,000.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 70             | Mbps         | \$ 1,078.00  | 3%  | \$ 1,078.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 80             | Mbps         | \$ 1,167.00  | 3%  | \$ 1,167.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 90             | Mbps         | \$ 1,245.00  | 3%  | \$ 1,245.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 100            | Mbps         | \$ 1,334.00  | 3%  | \$ 1,334.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 200            | Mbps         | \$ 1,434.00  | 3%  | \$ 1,434.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 300            | Mbps         | \$ 1,534.00  | 3%  | \$ 1,534.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 400            | Mbps         | \$ 1,634.00  | 3%  | \$ 1,634.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 500            | Mbps         | \$ 1,734.00  | 3%  | \$ 1,734.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 600            | Mbps         | \$ 1,834.00  | 3%  | \$ 1,834.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 700            | Mbps         | \$ 1,934.00  | 3%  | \$ 1,934.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 800            | Mbps         | \$ 2,034.00  | 3%  | \$ 2,034.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 900            | Mbps         | \$ 2,134.00  | 3%  | \$ 2,134.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 1000           | Mbps         | \$ 2,234.00  | 3%  | \$ 2,234.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 2000           | Mbps         | \$ 2,767.00  | 3%  | \$ 2,767.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 3000           | Mbps         | \$ 3,423.00  | 3%  | \$ 3,423.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 4000           | Mbps         | \$ 4,245.00  | 3%  | \$ 4,245.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 5000           | Mbps         | \$ 5,267.00  | 3%  | \$ 5,267.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 6000           | Mbps         | \$ 6,534.00  | 3%  | \$ 6,534.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 7000           | Mbps         | \$ 8,100.00  | 3%  | \$ 8,100.03                      | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 8000           | Mbps         | \$ 10,045.00 | 3%  | \$ 10,045.03                     | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 9000           | Mbps         | \$ 12,456.00 | 3%  | \$ 12,456.03                     | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 10000          | Mbps         | \$ 15,445.00 | 3%  | \$ 15,445.03                     | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 20000          | Mbps         | \$ 20,589.00 | 3%  | \$ 20,589.03                     | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 30000          | Mbps         | \$ 25,732.00 | 3%  | \$ 25,732.03                     | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 40000          | Mbps         | \$ 30,875.00 | 3%  | \$ 30,875.03                     | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 50000          | Mbps         | \$ 36,034.00 | 3%  | \$ 36,034.03                     | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 60000          | Mbps         | \$ 41,177.00 | 3%  | \$ 41,177.03                     | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 70000          | Mbps         | \$ 46,320.00 | 3%  | \$ 46,320.03                     | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 80000          | Mbps         | \$ 51,479.00 | 3%  | \$ 51,479.03                     | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |
| ENS - Basic Network Bandwidth               | 90000          | Mbps         | \$ 56,622.00 | 3%  | \$ 56,622.03                     | SEE NETWORK INTERFACE CHARGES | \$0 FIBER                        |

|                                       |          |      |    |            |    |              |                               |     |        |
|---------------------------------------|----------|------|----|------------|----|--------------|-------------------------------|-----|--------|
| ENS - Basic Network Bandwidth         | 100000   | Mbps | \$ | 61,780.00  | 3% | \$ 61,780.03 | SEE NETWORK INTERFACE CHARGES | \$0 | FIBER  |
| <b>Ethernet Network Interface</b>     |          |      |    |            |    |              |                               |     |        |
| Ethernet Network Interface - 10 / 100 | PER PORT |      |    | \$165.00   | 3% | \$ 165.03    | \$ 500.00                     | \$0 | COPPER |
| Ethernet Network Interface - Gig E    | PER PORT |      |    | \$715.00   | 3% | \$ 715.03    | \$ 3,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 10 Gig   | PER PORT |      |    | \$2,250.00 | 3% | \$ 2,250.03  | \$ 5,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 100 Gig  | PER PORT |      |    | \$9,000.00 | 3% | \$ 9,000.03  | \$ 10,000.00                  | \$0 | FIBER  |

PRICING PROPOSAL FORM

FUNCTIONAL AREA III - (all LATAS)

| DESCRIPTION  |       |      | COST PER MONTH | TAXES / FEES | TOTAL MRC    | NRC                           | ONE - TIME COST TO EXTEND DEMARC | TRANSPORT MEDIUM             | HAND-OFF OPTIONS |
|--|-------|------|----------------|--------------|--------------|-------------------------------|----------------------------------|------------------------------|------------------|
| <b>ETHERNET NETWORK SERVICES (ENS) "ANY TO ANY" LAYER 2 - PRIORITY COS EVC</b> |       |      |                |              |              |                               |                                  |                              |                  |
| ENS - Priority Network Bandwidth   | 1     | Mbps | \$ 84.00       | 3%           | \$ 84.03     | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Priority Network Bandwidth   | 2     | Mbps | \$ 139.00      | 3%           | \$ 139.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Priority Network Bandwidth   | 3     | Mbps | \$ 200.00      | 3%           | \$ 200.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Priority Network Bandwidth   | 4     | Mbps | \$ 256.00      | 3%           | \$ 256.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Priority Network Bandwidth   | 5     | Mbps | \$ 317.00      | 3%           | \$ 317.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Priority Network Bandwidth   | 6     | Mbps | \$ 373.00      | 3%           | \$ 373.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Priority Network Bandwidth   | 7     | Mbps | \$ 434.00      | 3%           | \$ 434.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Priority Network Bandwidth   | 8     | Mbps | \$ 489.00      | 3%           | \$ 489.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Priority Network Bandwidth   | 9     | Mbps | \$ 545.00      | 3%           | \$ 545.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Priority Network Bandwidth   | 10    | Mbps | \$ 612.00      | 3%           | \$ 612.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Priority Network Bandwidth   | 11    | Mbps | \$ 622.00      | 3%           | \$ 622.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Priority Network Bandwidth   | 13    | Mbps | \$ 644.00      | 3%           | \$ 644.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Priority Network Bandwidth   | 15    | Mbps | \$ 667.00      | 3%           | \$ 667.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Priority Network Bandwidth   | 20    | Mbps | \$ 723.00      | 3%           | \$ 723.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Priority Network Bandwidth   | 25    | Mbps | \$ 778.00      | 3%           | \$ 778.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 30    | Mbps | \$ 823.00      | 3%           | \$ 823.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 40    | Mbps | \$ 912.00      | 3%           | \$ 912.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 50    | Mbps | \$ 1,000.00    | 3%           | \$ 1,000.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 60    | Mbps | \$ 1,089.00    | 3%           | \$ 1,089.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 70    | Mbps | \$ 1,189.00    | 3%           | \$ 1,189.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 80    | Mbps | \$ 1,278.00    | 3%           | \$ 1,278.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 90    | Mbps | \$ 1,367.00    | 3%           | \$ 1,367.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 100   | Mbps | \$ 1,456.00    | 3%           | \$ 1,456.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 200   | Mbps | \$ 1,612.00    | 3%           | \$ 1,612.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 300   | Mbps | \$ 1,756.00    | 3%           | \$ 1,756.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 400   | Mbps | \$ 1,912.00    | 3%           | \$ 1,912.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 500   | Mbps | \$ 2,056.00    | 3%           | \$ 2,056.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 600   | Mbps | \$ 2,212.00    | 3%           | \$ 2,212.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 700   | Mbps | \$ 2,356.00    | 3%           | \$ 2,356.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 800   | Mbps | \$ 2,512.00    | 3%           | \$ 2,512.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 900   | Mbps | \$ 2,656.00    | 3%           | \$ 2,656.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 1000  | Mbps | \$ 2,812.00    | 3%           | \$ 2,812.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 2000  | Mbps | \$ 3,178.00    | 3%           | \$ 3,178.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 3000  | Mbps | \$ 3,945.00    | 3%           | \$ 3,945.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 4000  | Mbps | \$ 4,889.00    | 3%           | \$ 4,889.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 5000  | Mbps | \$ 6,056.00    | 3%           | \$ 6,056.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 6000  | Mbps | \$ 7,512.00    | 3%           | \$ 7,512.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 7000  | Mbps | \$ 9,312.00    | 3%           | \$ 9,312.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 8000  | Mbps | \$ 11,545.00   | 3%           | \$ 11,545.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 9000  | Mbps | \$ 14,323.00   | 3%           | \$ 14,323.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 10000 | Mbps | \$ 17,756.00   | 3%           | \$ 17,756.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 20000 | Mbps | \$ 23,669.00   | 3%           | \$ 23,669.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 30000 | Mbps | \$ 29,582.00   | 3%           | \$ 29,582.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 40000 | Mbps | \$ 35,495.00   | 3%           | \$ 35,495.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 50000 | Mbps | \$ 41,425.00   | 3%           | \$ 41,425.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 60000 | Mbps | \$ 47,338.00   | 3%           | \$ 47,338.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 70000 | Mbps | \$ 53,251.00   | 3%           | \$ 53,251.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 80000 | Mbps | \$ 59,181.00   | 3%           | \$ 59,181.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Priority Network Bandwidth   | 90000 | Mbps | \$ 65,094.00   | 3%           | \$ 65,094.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |

|                                       |          |      |    |            |    |              |                               |     |        |
|---------------------------------------|----------|------|----|------------|----|--------------|-------------------------------|-----|--------|
| ENS - Priority Network Bandwidth      | 100000   | Mbps | \$ | 71,024.00  | 3% | \$ 71,024.03 | SEE NETWORK INTERFACE CHARGES | \$0 | FIBER  |
| <b>Ethernet Network Interface</b>     |          |      |    |            |    |              |                               |     |        |
| Ethernet Network Interface - 10 / 100 | PER PORT |      |    | \$165.00   | 3% | \$ 165.03    | \$ 500.00                     | \$0 | COPPER |
| Ethernet Network Interface - Gig E    | PER PORT |      |    | \$715.00   | 3% | \$ 715.03    | \$ 3,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 10 Gig   | PER PORT |      |    | \$2,250.00 | 3% | \$ 2,250.03  | \$ 5,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 100 Gig  | PER PORT |      |    | \$9,000.00 | 3% | \$ 9,000.03  | \$ 10,000.00                  | \$0 | FIBER  |

**PRICING PROPOSAL FORM**

**FUNCTIONAL AREA III - (all LATAS)**

| DESCRIPTION   |       | COST PER MONTH | TAXES / FEES | TOTAL MRC    | NRC                           | ONE - TIME COST TO EXTEND DEMARC | TRANSPORT MEDIUM             | HAND-OFF OPTIONS |
|---|-------|----------------|--------------|--------------|-------------------------------|----------------------------------|------------------------------|------------------|
| <b>ETHERNET NETWORK SERVICES (ENS) "ANY TO ANY" LAYER 2 - PREMIUM COS EVC</b> |       |                |              |              |                               |                                  |                              |                  |
| ENS - Premium Network Bandwidth   | 1     | \$ 89.00       | 3%           | \$ 89.03     | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Premium Network Bandwidth   | 2     | \$ 145.00      | 3%           | \$ 145.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Premium Network Bandwidth   | 3     | \$ 208.00      | 3%           | \$ 208.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Premium Network Bandwidth   | 4     | \$ 273.00      | 3%           | \$ 273.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Premium Network Bandwidth   | 5     | \$ 334.00      | 3%           | \$ 334.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Premium Network Bandwidth   | 6     | \$ 395.00      | 3%           | \$ 395.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Premium Network Bandwidth   | 7     | \$ 456.00      | 3%           | \$ 456.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Premium Network Bandwidth   | 8     | \$ 517.00      | 3%           | \$ 517.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Premium Network Bandwidth   | 9     | \$ 578.00      | 3%           | \$ 578.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Premium Network Bandwidth   | 10    | \$ 634.00      | 3%           | \$ 634.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Premium Network Bandwidth   | 11    | \$ 650.00      | 3%           | \$ 650.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Premium Network Bandwidth   | 13    | \$ 667.00      | 3%           | \$ 667.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Premium Network Bandwidth   | 15    | \$ 717.00      | 3%           | \$ 717.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Premium Network Bandwidth   | 20    | \$ 800.00      | 3%           | \$ 800.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| ENS - Premium Network Bandwidth   | 25    | \$ 850.00      | 3%           | \$ 850.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 30    | \$ 900.00      | 3%           | \$ 900.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 40    | \$ 1,000.00    | 3%           | \$ 1,000.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 50    | \$ 1,100.00    | 3%           | \$ 1,100.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 60    | \$ 1,200.00    | 3%           | \$ 1,200.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 70    | \$ 1,300.00    | 3%           | \$ 1,300.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 80    | \$ 1,400.00    | 3%           | \$ 1,400.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 90    | \$ 1,512.00    | 3%           | \$ 1,512.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 100   | \$ 1,612.00    | 3%           | \$ 1,612.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 200   | \$ 1,812.00    | 3%           | \$ 1,812.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 300   | \$ 2,023.00    | 3%           | \$ 2,023.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 400   | \$ 2,223.00    | 3%           | \$ 2,223.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 500   | \$ 2,434.00    | 3%           | \$ 2,434.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 600   | \$ 2,634.00    | 3%           | \$ 2,634.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 700   | \$ 2,845.00    | 3%           | \$ 2,845.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 800   | \$ 3,045.00    | 3%           | \$ 3,045.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 900   | \$ 3,256.00    | 3%           | \$ 3,256.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 1000  | \$ 3,456.00    | 3%           | \$ 3,456.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 2000  | \$ 3,656.00    | 3%           | \$ 3,656.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 3000  | \$ 4,534.00    | 3%           | \$ 4,534.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 4000  | \$ 5,623.00    | 3%           | \$ 5,623.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 5000  | \$ 6,967.00    | 3%           | \$ 6,967.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 6000  | \$ 8,634.00    | 3%           | \$ 8,634.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 7000  | \$ 10,712.00   | 3%           | \$ 10,712.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 8000  | \$ 13,278.00   | 3%           | \$ 13,278.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 9000  | \$ 16,467.00   | 3%           | \$ 16,467.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 10000 | \$ 20,423.00   | 3%           | \$ 20,423.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 20000 | \$ 27,224.00   | 3%           | \$ 27,224.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 30000 | \$ 34,025.00   | 3%           | \$ 34,025.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 40000 | \$ 40,826.00   | 3%           | \$ 40,826.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 50000 | \$ 47,647.00   | 3%           | \$ 47,647.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 60000 | \$ 54,448.00   | 3%           | \$ 54,448.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 70000 | \$ 61,249.00   | 3%           | \$ 61,249.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 80000 | \$ 68,070.00   | 3%           | \$ 68,070.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| ENS - Premium Network Bandwidth   | 90000 | \$ 74,871.00   | 3%           | \$ 74,871.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |

|                                       |          |  |    |            |    |              |                               |     |        |
|---------------------------------------|----------|--|----|------------|----|--------------|-------------------------------|-----|--------|
| ENS - Premium Network Bandwidth       | 100000   |  | \$ | 81,692.00  | 3% | \$ 81,692.03 | SEE NETWORK INTERFACE CHARGES | \$0 | FIBER  |
| <b>Ethernet Network Interface</b>     |          |  |    |            |    |              |                               |     |        |
| Ethernet Network Interface - 10 / 100 | PER PORT |  |    | \$165.00   | 3% | \$ 165.03    | \$ 500.00                     | \$0 | COPPER |
| Ethernet Network Interface - Gig E    | PER PORT |  |    | \$715.00   | 3% | \$ 715.03    | \$ 3,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 10 Gig   | PER PORT |  |    | \$2,250.00 | 3% | \$ 2,250.03  | \$ 5,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 100 Gig  | PER PORT |  |    | \$9,000.00 | 3% | \$ 9,000.03  | \$ 10,000.00                  | \$0 | FIBER  |

**PRICING PROPOSAL FORM**

**FUNCTIONAL AREA III - (all LATAS)**

| DESCRIPTION                                   |       | COST PER MONTH | TAXES / FEES | TOTAL MRC | NRC          | ONE - TIME COST TO EXTEND DEMARC | TRANSPORT MEDIUM                 | HAND-OFF OPTIONS |
|---|-------|----------------|--------------|-----------|--------------|----------------------------------|----------------------------------|------------------|
| <b>ETHERNET PRIVATE LINE "POINT TO POINT"</b> |       |                |              |           |              |                                  |                                  |                  |
| <b>LAYER 2 - BASIC COS EVC</b>                |       |                |              |           |              |                                  |                                  |                  |
| EPL - Basic Network Bandwidth                 | 1     | Mbps           | \$ 44.00     | 3%        | \$ 44.03     | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Basic Network Bandwidth                 | 2     | Mbps           | \$ 89.00     | 3%        | \$ 89.03     | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Basic Network Bandwidth                 | 3     | Mbps           | \$ 144.00    | 3%        | \$ 144.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Basic Network Bandwidth                 | 4     | Mbps           | \$ 189.00    | 3%        | \$ 189.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Basic Network Bandwidth                 | 5     | Mbps           | \$ 233.00    | 3%        | \$ 233.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Basic Network Bandwidth                 | 6     | Mbps           | \$ 278.00    | 3%        | \$ 278.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Basic Network Bandwidth                 | 7     | Mbps           | \$ 322.00    | 3%        | \$ 322.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Basic Network Bandwidth                 | 8     | Mbps           | \$ 378.00    | 3%        | \$ 378.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Basic Network Bandwidth                 | 9     | Mbps           | \$ 422.00    | 3%        | \$ 422.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Basic Network Bandwidth                 | 10    | Mbps           | \$ 467.00    | 3%        | \$ 467.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Basic Network Bandwidth                 | 11    | Mbps           | \$ 478.00    | 3%        | \$ 478.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Basic Network Bandwidth                 | 13    | Mbps           | \$ 489.00    | 3%        | \$ 489.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Basic Network Bandwidth                 | 15    | Mbps           | \$ 511.00    | 3%        | \$ 511.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Basic Network Bandwidth                 | 20    | Mbps           | \$ 533.00    | 3%        | \$ 533.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Basic Network Bandwidth                 | 25    | Mbps           | \$ 578.00    | 3%        | \$ 578.03    | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 30    | Mbps           | \$ 611.00    | 3%        | \$ 611.03    | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 40    | Mbps           | \$ 678.00    | 3%        | \$ 678.03    | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 50    | Mbps           | \$ 744.00    | 3%        | \$ 744.03    | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 60    | Mbps           | \$ 822.00    | 3%        | \$ 822.03    | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 70    | Mbps           | \$ 889.00    | 3%        | \$ 889.03    | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 80    | Mbps           | \$ 958.00    | 3%        | \$ 958.03    | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 90    | Mbps           | \$ 1,022.00  | 3%        | \$ 1,022.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 100   | Mbps           | \$ 1,100.00  | 3%        | \$ 1,100.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 200   | Mbps           | \$ 1,267.00  | 3%        | \$ 1,267.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 300   | Mbps           | \$ 1,367.00  | 3%        | \$ 1,367.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 400   | Mbps           | \$ 1,467.00  | 3%        | \$ 1,467.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 500   | Mbps           | \$ 1,567.00  | 3%        | \$ 1,567.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 600   | Mbps           | \$ 1,667.00  | 3%        | \$ 1,667.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 700   | Mbps           | \$ 1,767.00  | 3%        | \$ 1,767.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 800   | Mbps           | \$ 1,867.00  | 3%        | \$ 1,867.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 900   | Mbps           | \$ 1,967.00  | 3%        | \$ 1,967.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 1000  | Mbps           | \$ 2,067.00  | 3%        | \$ 2,067.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 2000  | Mbps           | \$ 2,689.00  | 3%        | \$ 2,689.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 3000  | Mbps           | \$ 3,489.00  | 3%        | \$ 3,489.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 4000  | Mbps           | \$ 4,533.00  | 3%        | \$ 4,533.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 5000  | Mbps           | \$ 5,989.00  | 3%        | \$ 5,989.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 6000  | Mbps           | \$ 8,022.00  | 3%        | \$ 8,022.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 7000  | Mbps           | \$ 10,033.00 | 3%        | \$ 10,033.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 8000  | Mbps           | \$ 12,144.00 | 3%        | \$ 12,144.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 9000  | Mbps           | \$ 14,322.00 | 3%        | \$ 14,322.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 10000 | Mbps           | \$ 16,333.00 | 3%        | \$ 16,333.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 20000 | Mbps           | \$ 21,773.00 | 3%        | \$ 21,773.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 30000 | Mbps           | \$ 27,212.00 | 3%        | \$ 27,212.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 40000 | Mbps           | \$ 32,651.00 | 3%        | \$ 32,651.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 50000 | Mbps           | \$ 38,107.00 | 3%        | \$ 38,107.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 60000 | Mbps           | \$ 43,546.00 | 3%        | \$ 43,546.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 70000 | Mbps           | \$ 48,984.00 | 3%        | \$ 48,984.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 80000 | Mbps           | \$ 54,440.00 | 3%        | \$ 54,440.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Basic Network Bandwidth                 | 90000 | Mbps           | \$ 59,879.00 | 3%        | \$ 59,879.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |

|                                       |          |      |    |            |    |              |                               |     |        |
|---------------------------------------|----------|------|----|------------|----|--------------|-------------------------------|-----|--------|
| EPL - Basic Network Bandwidth         | 100000   | Mbps | \$ | 65,333.00  | 3% | \$ 65,333.03 | SEE NETWORK INTERFACE CHARGES | \$0 | FIBER  |
| <b>Ethernet Network Interface</b>     |          |      |    |            |    |              |                               |     |        |
| Ethernet Network Interface - 10 / 100 | PER PORT |      |    | \$165.00   | 3% | \$ 165.03    | \$ 500.00                     | \$0 | COPPER |
| Ethernet Network Interface - Gig E    | PER PORT |      |    | \$715.00   | 3% | \$ 715.03    | \$ 3,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 10 Gig   | PER PORT |      |    | \$2,250.00 | 3% | \$ 2,250.03  | \$ 5,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 100 Gig  | PER PORT |      |    | \$9,000.00 | 3% | \$ 9,000.03  | \$ 10,000.00                  | \$0 | FIBER  |

**PRICING PROPOSAL FORM**

**FUNCTIONAL AREA III - (all LATAS)**

| DESCRIPTION                                   |       | COST PER MONTH | TAXES / FEES | TOTAL MRC | NRC          | ONE - TIME COST TO EXTEND DEMARC | TRANSPORT MEDIUM                 | HAND-OFF OPTIONS |
|---|-------|----------------|--------------|-----------|--------------|----------------------------------|----------------------------------|------------------|
| <b>ETHERNET PRIVATE LINE "POINT TO POINT"</b> |       |                |              |           |              |                                  |                                  |                  |
| <b>LAYER 2 - PRIORITY COS EVC</b>             |       |                |              |           |              |                                  |                                  |                  |
| EPL - Priority Network Bandwidth              | 1     | Mbps           | \$ 56.00     | 3%        | \$ 56.03     | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Priority Network Bandwidth              | 2     | Mbps           | \$ 111.00    | 3%        | \$ 111.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Priority Network Bandwidth              | 3     | Mbps           | \$ 156.00    | 3%        | \$ 156.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Priority Network Bandwidth              | 4     | Mbps           | \$ 211.00    | 3%        | \$ 211.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Priority Network Bandwidth              | 5     | Mbps           | \$ 267.00    | 3%        | \$ 267.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Priority Network Bandwidth              | 6     | Mbps           | \$ 322.00    | 3%        | \$ 322.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Priority Network Bandwidth              | 7     | Mbps           | \$ 378.00    | 3%        | \$ 378.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Priority Network Bandwidth              | 8     | Mbps           | \$ 433.00    | 3%        | \$ 433.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Priority Network Bandwidth              | 9     | Mbps           | \$ 478.00    | 3%        | \$ 478.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Priority Network Bandwidth              | 10    | Mbps           | \$ 533.00    | 3%        | \$ 533.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Priority Network Bandwidth              | 11    | Mbps           | \$ 544.00    | 3%        | \$ 544.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Priority Network Bandwidth              | 13    | Mbps           | \$ 567.00    | 3%        | \$ 567.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Priority Network Bandwidth              | 15    | Mbps           | \$ 589.00    | 3%        | \$ 589.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Priority Network Bandwidth              | 20    | Mbps           | \$ 622.00    | 3%        | \$ 622.03    | SEE NETWORK INTERFACE CHARGES    | \$0 HYBRID FIBER - COAX or FIBER |                  |
| EPL - Priority Network Bandwidth              | 25    | Mbps           | \$ 661.00    | 3%        | \$ 661.03    | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 30    | Mbps           | \$ 700.00    | 3%        | \$ 700.03    | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 40    | Mbps           | \$ 778.00    | 3%        | \$ 778.03    | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 50    | Mbps           | \$ 856.00    | 3%        | \$ 856.03    | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 60    | Mbps           | \$ 944.00    | 3%        | \$ 944.03    | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 70    | Mbps           | \$ 1,022.00  | 3%        | \$ 1,022.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 80    | Mbps           | \$ 1,100.00  | 3%        | \$ 1,100.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 90    | Mbps           | \$ 1,178.00  | 3%        | \$ 1,178.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 100   | Mbps           | \$ 1,267.00  | 3%        | \$ 1,267.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 200   | Mbps           | \$ 1,367.00  | 3%        | \$ 1,367.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 300   | Mbps           | \$ 1,478.00  | 3%        | \$ 1,478.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 400   | Mbps           | \$ 1,578.00  | 3%        | \$ 1,578.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 500   | Mbps           | \$ 1,689.00  | 3%        | \$ 1,689.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 600   | Mbps           | \$ 1,800.00  | 3%        | \$ 1,800.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 700   | Mbps           | \$ 1,900.00  | 3%        | \$ 1,900.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 800   | Mbps           | \$ 2,011.00  | 3%        | \$ 2,011.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 900   | Mbps           | \$ 2,122.00  | 3%        | \$ 2,122.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 1000  | Mbps           | \$ 2,222.00  | 3%        | \$ 2,222.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 2000  | Mbps           | \$ 3,089.00  | 3%        | \$ 3,089.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 3000  | Mbps           | \$ 4,011.00  | 3%        | \$ 4,011.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 4000  | Mbps           | \$ 5,222.00  | 3%        | \$ 5,222.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 5000  | Mbps           | \$ 6,889.00  | 3%        | \$ 6,889.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 6000  | Mbps           | \$ 9,233.00  | 3%        | \$ 9,233.03  | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 7000  | Mbps           | \$ 11,544.00 | 3%        | \$ 11,544.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 8000  | Mbps           | \$ 13,967.00 | 3%        | \$ 13,967.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 9000  | Mbps           | \$ 16,478.00 | 3%        | \$ 16,478.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 10000 | Mbps           | \$ 18,778.00 | 3%        | \$ 18,778.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 20000 | Mbps           | \$ 25,038.00 | 3%        | \$ 25,038.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 30000 | Mbps           | \$ 31,298.00 | 3%        | \$ 31,298.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 40000 | Mbps           | \$ 37,558.00 | 3%        | \$ 37,558.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 50000 | Mbps           | \$ 43,818.00 | 3%        | \$ 43,818.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 60000 | Mbps           | \$ 50,078.00 | 3%        | \$ 50,078.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 70000 | Mbps           | \$ 56,338.00 | 3%        | \$ 56,338.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 80000 | Mbps           | \$ 62,598.00 | 3%        | \$ 62,598.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |
| EPL - Priority Network Bandwidth              | 90000 | Mbps           | \$ 68,858.00 | 3%        | \$ 68,858.03 | SEE NETWORK INTERFACE CHARGES    | \$0 FIBER                        |                  |

|                                       |          |      |    |            |    |              |                               |     |        |
|---------------------------------------|----------|------|----|------------|----|--------------|-------------------------------|-----|--------|
| EPL - Priority Network Bandwidth      | 100000   | Mbps | \$ | 75,112.00  | 3% | \$ 75,112.03 | SEE NETWORK INTERFACE CHARGES | \$0 | FIBER  |
| <b>Ethernet Network Interface</b>     |          |      |    |            |    |              |                               |     |        |
| Ethernet Network Interface - 10 / 100 | PER PORT |      |    | \$165.00   | 3% | \$ 165.03    | \$ 500.00                     | \$0 | COPPER |
| Ethernet Network Interface - Gig E    | PER PORT |      |    | \$715.00   | 3% | \$ 715.03    | \$ 3,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 10 Gig   | PER PORT |      |    | \$2,250.00 | 3% | \$ 2,250.03  | \$ 5,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 100 Gig  | PER PORT |      |    | \$9,000.00 | 3% | \$ 9,000.03  | \$ 10,000.00                  | \$0 | FIBER  |

**PRICING PROPOSAL FORM**

**FUNCTIONAL AREA III - (all LATAS)**

| DESCRIPTION                                   |       |      | COST PER MONTH | TAXES / FEES | TOTAL MRC    | NRC                           | ONE - TIME COST TO EXTEND DEMARC | TRANSPORT MEDIUM             | HAND-OFF OPTIONS |
|---|-------|------|----------------|--------------|--------------|-------------------------------|----------------------------------|------------------------------|------------------|
| <b>ETHERNET PRIVATE LINE "POINT TO POINT"</b> |       |      |                |              |              |                               |                                  |                              |                  |
| <b>LAYER 2 - PREMIUM COS EVC</b>              |       |      |                |              |              |                               |                                  |                              |                  |
| EPL - Premium Network Bandwidth               | 1     | Mbps | \$ 67.00       | 3%           | \$ 67.03     | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EPL - Premium Network Bandwidth               | 2     | Mbps | \$ 122.00      | 3%           | \$ 122.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EPL - Premium Network Bandwidth               | 3     | Mbps | \$ 189.00      | 3%           | \$ 189.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EPL - Premium Network Bandwidth               | 4     | Mbps | \$ 244.00      | 3%           | \$ 244.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EPL - Premium Network Bandwidth               | 5     | Mbps | \$ 311.00      | 3%           | \$ 311.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EPL - Premium Network Bandwidth               | 6     | Mbps | \$ 367.00      | 3%           | \$ 367.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EPL - Premium Network Bandwidth               | 7     | Mbps | \$ 433.00      | 3%           | \$ 433.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EPL - Premium Network Bandwidth               | 8     | Mbps | \$ 489.00      | 3%           | \$ 489.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EPL - Premium Network Bandwidth               | 9     | Mbps | \$ 556.00      | 3%           | \$ 556.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EPL - Premium Network Bandwidth               | 10    | Mbps | \$ 622.00      | 3%           | \$ 622.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EPL - Premium Network Bandwidth               | 11    | Mbps | \$ 633.00      | 3%           | \$ 633.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EPL - Premium Network Bandwidth               | 13    | Mbps | \$ 656.00      | 3%           | \$ 656.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EPL - Premium Network Bandwidth               | 15    | Mbps | \$ 678.00      | 3%           | \$ 678.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EPL - Premium Network Bandwidth               | 20    | Mbps | \$ 711.00      | 3%           | \$ 711.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EPL - Premium Network Bandwidth               | 25    | Mbps | \$ 756.00      | 3%           | \$ 756.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 30    | Mbps | \$ 800.00      | 3%           | \$ 800.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 40    | Mbps | \$ 900.00      | 3%           | \$ 900.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 50    | Mbps | \$ 989.00      | 3%           | \$ 989.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 60    | Mbps | \$ 1,078.00    | 3%           | \$ 1,078.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 70    | Mbps | \$ 1,178.00    | 3%           | \$ 1,178.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 80    | Mbps | \$ 1,267.00    | 3%           | \$ 1,267.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 90    | Mbps | \$ 1,356.00    | 3%           | \$ 1,356.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 100   | Mbps | \$ 1,456.00    | 3%           | \$ 1,456.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 200   | Mbps | \$ 1,578.00    | 3%           | \$ 1,578.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 300   | Mbps | \$ 1,700.00    | 3%           | \$ 1,700.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 400   | Mbps | \$ 1,822.00    | 3%           | \$ 1,822.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 500   | Mbps | \$ 1,944.00    | 3%           | \$ 1,944.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 600   | Mbps | \$ 2,067.00    | 3%           | \$ 2,067.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 700   | Mbps | \$ 2,189.00    | 3%           | \$ 2,189.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 800   | Mbps | \$ 2,311.00    | 3%           | \$ 2,311.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 900   | Mbps | \$ 2,433.00    | 3%           | \$ 2,433.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 1000  | Mbps | \$ 2,567.00    | 3%           | \$ 2,567.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 2000  | Mbps | \$ 3,556.00    | 3%           | \$ 3,556.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 3000  | Mbps | \$ 4,622.00    | 3%           | \$ 4,622.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 4000  | Mbps | \$ 6,000.00    | 3%           | \$ 6,000.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 5000  | Mbps | \$ 7,922.00    | 3%           | \$ 7,922.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 6000  | Mbps | \$ 10,611.00   | 3%           | \$ 10,611.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 7000  | Mbps | \$ 13,267.00   | 3%           | \$ 13,267.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 8000  | Mbps | \$ 16,056.00   | 3%           | \$ 16,056.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 9000  | Mbps | \$ 18,944.00   | 3%           | \$ 18,944.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 10000 | Mbps | \$ 21,600.00   | 3%           | \$ 21,600.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 20000 | Mbps | \$ 28,793.00   | 3%           | \$ 28,793.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 30000 | Mbps | \$ 35,986.00   | 3%           | \$ 35,986.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 40000 | Mbps | \$ 43,179.00   | 3%           | \$ 43,179.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 50000 | Mbps | \$ 50,393.00   | 3%           | \$ 50,393.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 60000 | Mbps | \$ 57,586.00   | 3%           | \$ 57,586.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 70000 | Mbps | \$ 64,779.00   | 3%           | \$ 64,779.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 80000 | Mbps | \$ 71,993.00   | 3%           | \$ 71,993.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EPL - Premium Network Bandwidth               | 90000 | Mbps | \$ 79,186.00   | 3%           | \$ 79,186.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |

|                                       |          |      |    |            |    |              |                               |     |        |
|---------------------------------------|----------|------|----|------------|----|--------------|-------------------------------|-----|--------|
| EPL - Premium Network Bandwidth       | 100000   | Mbps | \$ | 86,400.00  | 3% | \$ 86,400.03 | SEE NETWORK INTERFACE CHARGES | \$0 | FIBER  |
| <b>Ethernet Network Interface</b>     |          |      |    |            |    |              |                               |     |        |
| Ethernet Network Interface - 10 / 100 | PER PORT |      |    | \$165.00   | 3% | \$ 165.03    | \$ 500.00                     | \$0 | COPPER |
| Ethernet Network Interface - Gig E    | PER PORT |      |    | \$715.00   | 3% | \$ 715.03    | \$ 3,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 10 Gig   | PER PORT |      |    | \$2,250.00 | 3% | \$ 2,250.03  | \$ 5,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 100 Gig  | PER PORT |      |    | \$9,000.00 | 3% | \$ 9,000.03  | \$ 10,000.00                  | \$0 | FIBER  |

**PRICING PROPOSAL FORM**

**FUNCTIONAL AREA III - (all LATAS)**

| DESCRIPTION  |       |      | COST PER MONTH | TAXES / FEES | TOTAL MRC    | NRC                           | ONE - TIME COST TO EXTEND DEMARC | TRANSPORT MEDIUM             | HAND-OFF OPTIONS |
|--|-------|------|----------------|--------------|--------------|-------------------------------|----------------------------------|------------------------------|------------------|
| <b>ETHERNET VIRTUAL PRIVATE LINE "HUB AND SPOKE" LAYER 2 - BASIC COS EVC</b> |       |      |                |              |              |                               |                                  |                              |                  |
| EVPL - Basic Network Bandwidth   | 1     | Mbps | \$ 111.00      | 3%           | \$ 111.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Basic Network Bandwidth   | 2     | Mbps | \$ 156.00      | 3%           | \$ 156.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Basic Network Bandwidth   | 3     | Mbps | \$ 233.00      | 3%           | \$ 233.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Basic Network Bandwidth   | 4     | Mbps | \$ 311.00      | 3%           | \$ 311.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Basic Network Bandwidth   | 5     | Mbps | \$ 350.00      | 3%           | \$ 350.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Basic Network Bandwidth   | 6     | Mbps | \$ 389.00      | 3%           | \$ 389.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Basic Network Bandwidth   | 7     | Mbps | \$ 411.00      | 3%           | \$ 411.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Basic Network Bandwidth   | 8     | Mbps | \$ 467.00      | 3%           | \$ 467.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Basic Network Bandwidth   | 9     | Mbps | \$ 522.00      | 3%           | \$ 522.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Basic Network Bandwidth   | 10    | Mbps | \$ 578.00      | 3%           | \$ 578.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Basic Network Bandwidth   | 11    | Mbps | \$ 589.00      | 3%           | \$ 589.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Basic Network Bandwidth   | 13    | Mbps | \$ 611.00      | 3%           | \$ 611.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Basic Network Bandwidth   | 15    | Mbps | \$ 633.00      | 3%           | \$ 633.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Basic Network Bandwidth   | 20    | Mbps | \$ 667.00      | 3%           | \$ 667.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Basic Network Bandwidth   | 25    | Mbps | \$ 722.00      | 3%           | \$ 722.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 30    | Mbps | \$ 744.00      | 3%           | \$ 744.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 40    | Mbps | \$ 833.00      | 3%           | \$ 833.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 50    | Mbps | \$ 911.00      | 3%           | \$ 911.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 60    | Mbps | \$ 1,000.00    | 3%           | \$ 1,000.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 70    | Mbps | \$ 1,078.00    | 3%           | \$ 1,078.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 80    | Mbps | \$ 1,167.00    | 3%           | \$ 1,167.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 90    | Mbps | \$ 1,244.00    | 3%           | \$ 1,244.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 100   | Mbps | \$ 1,333.00    | 3%           | \$ 1,333.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 200   | Mbps | \$ 1,433.00    | 3%           | \$ 1,433.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 300   | Mbps | \$ 1,533.00    | 3%           | \$ 1,533.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 400   | Mbps | \$ 1,633.00    | 3%           | \$ 1,633.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 500   | Mbps | \$ 1,733.00    | 3%           | \$ 1,733.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 600   | Mbps | \$ 1,833.00    | 3%           | \$ 1,833.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 700   | Mbps | \$ 1,933.00    | 3%           | \$ 1,933.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 800   | Mbps | \$ 2,033.00    | 3%           | \$ 2,033.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 900   | Mbps | \$ 2,133.00    | 3%           | \$ 2,133.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 1000  | Mbps | \$ 2,233.00    | 3%           | \$ 2,233.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 2000  | Mbps | \$ 2,767.00    | 3%           | \$ 2,767.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 3000  | Mbps | \$ 3,422.00    | 3%           | \$ 3,422.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 4000  | Mbps | \$ 4,244.00    | 3%           | \$ 4,244.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 5000  | Mbps | \$ 5,267.00    | 3%           | \$ 5,267.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 6000  | Mbps | \$ 6,533.00    | 3%           | \$ 6,533.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 7000  | Mbps | \$ 8,100.00    | 3%           | \$ 8,100.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 8000  | Mbps | \$ 10,044.00   | 3%           | \$ 10,044.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 9000  | Mbps | \$ 12,456.00   | 3%           | \$ 12,456.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 10000 | Mbps | \$ 15,444.00   | 3%           | \$ 15,444.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 20000 | Mbps | \$ 20,587.00   | 3%           | \$ 20,587.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 30000 | Mbps | \$ 25,730.00   | 3%           | \$ 25,730.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 40000 | Mbps | \$ 30,873.00   | 3%           | \$ 30,873.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 50000 | Mbps | \$ 36,031.00   | 3%           | \$ 36,031.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 60000 | Mbps | \$ 41,174.00   | 3%           | \$ 41,174.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 70000 | Mbps | \$ 46,317.00   | 3%           | \$ 46,317.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 80000 | Mbps | \$ 51,475.00   | 3%           | \$ 51,475.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Basic Network Bandwidth   | 90000 | Mbps | \$ 56,618.00   | 3%           | \$ 56,618.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |

|                                       |          |      |    |            |    |              |                               |     |        |
|---------------------------------------|----------|------|----|------------|----|--------------|-------------------------------|-----|--------|
| EVPL - Basic Network Bandwidth        | 100000   | Mbps | \$ | 61,776.00  | 3% | \$ 61,776.03 | SEE NETWORK INTERFACE CHARGES | \$0 | FIBER  |
| <b>Ethernet Network Interface</b>     |          |      |    |            |    |              |                               |     |        |
| Ethernet Network Interface - 10 / 100 | PER PORT |      |    | \$165.00   | 3% | \$ 165.03    | \$ 500.00                     | \$0 | COPPER |
| Ethernet Network Interface - Gig E    | PER PORT |      |    | \$715.00   | 3% | \$ 715.03    | \$ 3,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 10 Gig   | PER PORT |      |    | \$2,250.00 | 3% | \$ 2,250.03  | \$ 5,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 100 Gig  | PER PORT |      |    | \$9,000.00 | 3% | \$ 9,000.03  | \$ 10,000.00                  | \$0 | FIBER  |

**PRICING PROPOSAL FORM**

**FUNCTIONAL AREA III - (all LATAS)**

| DESCRIPTION   |       |      | COST PER MONTH | TAXES / FEES | TOTAL MRC    | NRC                           | ONE - TIME COST TO EXTEND DEMARC | TRANSPORT MEDIUM             | HAND-OFF OPTIONS |
|---|-------|------|----------------|--------------|--------------|-------------------------------|----------------------------------|------------------------------|------------------|
| <b>ETHERNET VIRTUAL PRIVATE LINE "HUB AND SPOKE" LAYER 2 - PRIORITY COS EVC</b> |       |      |                |              |              |                               |                                  |                              |                  |
| EVPL - Priority Network Bandwidth   | 1     | Mbps | \$ 117.00      | 3%           | \$ 117.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Priority Network Bandwidth   | 2     | Mbps | \$ 161.00      | 3%           | \$ 161.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Priority Network Bandwidth   | 3     | Mbps | \$ 244.00      | 3%           | \$ 244.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Priority Network Bandwidth   | 4     | Mbps | \$ 322.00      | 3%           | \$ 322.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Priority Network Bandwidth   | 5     | Mbps | \$ 367.00      | 3%           | \$ 367.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Priority Network Bandwidth   | 6     | Mbps | \$ 406.00      | 3%           | \$ 406.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Priority Network Bandwidth   | 7     | Mbps | \$ 433.00      | 3%           | \$ 433.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Priority Network Bandwidth   | 8     | Mbps | \$ 489.00      | 3%           | \$ 489.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Priority Network Bandwidth   | 9     | Mbps | \$ 544.00      | 3%           | \$ 544.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Priority Network Bandwidth   | 10    | Mbps | \$ 611.00      | 3%           | \$ 611.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Priority Network Bandwidth   | 11    | Mbps | \$ 622.00      | 3%           | \$ 622.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Priority Network Bandwidth   | 13    | Mbps | \$ 644.00      | 3%           | \$ 644.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Priority Network Bandwidth   | 15    | Mbps | \$ 667.00      | 3%           | \$ 667.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Priority Network Bandwidth   | 20    | Mbps | \$ 722.00      | 3%           | \$ 722.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Priority Network Bandwidth   | 25    | Mbps | \$ 778.00      | 3%           | \$ 778.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 30    | Mbps | \$ 822.00      | 3%           | \$ 822.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 40    | Mbps | \$ 911.00      | 3%           | \$ 911.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 50    | Mbps | \$ 1,000.00    | 3%           | \$ 1,000.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 60    | Mbps | \$ 1,089.00    | 3%           | \$ 1,089.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 70    | Mbps | \$ 1,189.00    | 3%           | \$ 1,189.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 80    | Mbps | \$ 1,278.00    | 3%           | \$ 1,278.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 90    | Mbps | \$ 1,367.00    | 3%           | \$ 1,367.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 100   | Mbps | \$ 1,456.00    | 3%           | \$ 1,456.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 200   | Mbps | \$ 1,611.00    | 3%           | \$ 1,611.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 300   | Mbps | \$ 1,756.00    | 3%           | \$ 1,756.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 400   | Mbps | \$ 1,911.00    | 3%           | \$ 1,911.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 500   | Mbps | \$ 2,056.00    | 3%           | \$ 2,056.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 600   | Mbps | \$ 2,211.00    | 3%           | \$ 2,211.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 700   | Mbps | \$ 2,356.00    | 3%           | \$ 2,356.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 800   | Mbps | \$ 2,511.00    | 3%           | \$ 2,511.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 900   | Mbps | \$ 2,656.00    | 3%           | \$ 2,656.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 1000  | Mbps | \$ 2,811.00    | 3%           | \$ 2,811.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 2000  | Mbps | \$ 3,178.00    | 3%           | \$ 3,178.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 3000  | Mbps | \$ 3,944.00    | 3%           | \$ 3,944.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 4000  | Mbps | \$ 4,889.00    | 3%           | \$ 4,889.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 5000  | Mbps | \$ 6,056.00    | 3%           | \$ 6,056.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 6000  | Mbps | \$ 7,511.00    | 3%           | \$ 7,511.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 7000  | Mbps | \$ 9,311.00    | 3%           | \$ 9,311.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 8000  | Mbps | \$ 11,544.00   | 3%           | \$ 11,544.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 9000  | Mbps | \$ 14,322.00   | 3%           | \$ 14,322.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 10000 | Mbps | \$ 17,756.00   | 3%           | \$ 17,756.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 20000 | Mbps | \$ 23,669.00   | 3%           | \$ 23,669.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 30000 | Mbps | \$ 29,582.00   | 3%           | \$ 29,582.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 40000 | Mbps | \$ 35,495.00   | 3%           | \$ 35,495.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 50000 | Mbps | \$ 41,425.00   | 3%           | \$ 41,425.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 60000 | Mbps | \$ 47,338.00   | 3%           | \$ 47,338.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 70000 | Mbps | \$ 53,251.00   | 3%           | \$ 53,251.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 80000 | Mbps | \$ 59,181.00   | 3%           | \$ 59,181.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Priority Network Bandwidth   | 90000 | Mbps | \$ 65,094.00   | 3%           | \$ 65,094.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |

|                                       |          |      |    |            |    |              |                               |     |        |
|---------------------------------------|----------|------|----|------------|----|--------------|-------------------------------|-----|--------|
| EVPL - Priority Network Bandwidth     | 100000   | Mbps | \$ | 71,024.00  | 3% | \$ 71,024.03 | SEE NETWORK INTERFACE CHARGES | \$0 | FIBER  |
| <b>Ethernet Network Interface</b>     |          |      |    |            |    |              |                               |     |        |
| Ethernet Network Interface - 10 / 100 | PER PORT |      |    | \$165.00   | 3% | \$ 165.03    | \$ 500.00                     | \$0 | COPPER |
| Ethernet Network Interface - Gig E    | PER PORT |      |    | \$715.00   | 3% | \$ 715.03    | \$ 3,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 10 Gig   | PER PORT |      |    | \$2,250.00 | 3% | \$ 2,250.03  | \$ 5,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 100 Gig  | PER PORT |      |    | \$9,000.00 | 3% | \$ 9,000.03  | \$ 10,000.00                  | \$0 | FIBER  |

PRICING PROPOSAL FORM

FUNCTIONAL AREA III - (all LATAS)

| DESCRIPTION                                 |       |      | COST PER MONTH | TAXES / FEES | TOTAL MRC    | NRC                           | ONE - TIME COST TO EXTEND DEMARC | TRANSPORT MEDIUM             | HAND-OFF OPTIONS |
|---|-------|------|----------------|--------------|--------------|-------------------------------|----------------------------------|------------------------------|------------------|
| <b>ETHERNET VIRTUAL PRIVATE LINE "HUB</b>   |       |      |                |              |              |                               |                                  |                              |                  |
| <b>AND SPOKE" LAYER 2 - PREMIUM COS EVC</b> |       |      |                |              |              |                               |                                  |                              |                  |
| EVPL - Premium Network Bandwidth            | 1     | Mbps | \$ 122.00      | 3%           | \$ 122.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Premium Network Bandwidth            | 2     | Mbps | \$ 167.00      | 3%           | \$ 167.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Premium Network Bandwidth            | 3     | Mbps | \$ 256.00      | 3%           | \$ 256.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Premium Network Bandwidth            | 4     | Mbps | \$ 333.00      | 3%           | \$ 333.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Premium Network Bandwidth            | 5     | Mbps | \$ 394.00      | 3%           | \$ 394.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Premium Network Bandwidth            | 6     | Mbps | \$ 433.00      | 3%           | \$ 433.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Premium Network Bandwidth            | 7     | Mbps | \$ 456.00      | 3%           | \$ 456.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Premium Network Bandwidth            | 8     | Mbps | \$ 517.00      | 3%           | \$ 517.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Premium Network Bandwidth            | 9     | Mbps | \$ 578.00      | 3%           | \$ 578.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Premium Network Bandwidth            | 10    | Mbps | \$ 633.00      | 3%           | \$ 633.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Premium Network Bandwidth            | 11    | Mbps | \$ 650.00      | 3%           | \$ 650.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Premium Network Bandwidth            | 13    | Mbps | \$ 667.00      | 3%           | \$ 667.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Premium Network Bandwidth            | 15    | Mbps | \$ 717.00      | 3%           | \$ 717.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Premium Network Bandwidth            | 20    | Mbps | \$ 800.00      | 3%           | \$ 800.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | HYBRID FIBER - COAX or FIBER |                  |
| EVPL - Premium Network Bandwidth            | 25    | Mbps | \$ 850.00      | 3%           | \$ 850.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 30    | Mbps | \$ 900.00      | 3%           | \$ 900.03    | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 40    | Mbps | \$ 1,000.00    | 3%           | \$ 1,000.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 50    | Mbps | \$ 1,100.00    | 3%           | \$ 1,100.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 60    | Mbps | \$ 1,200.00    | 3%           | \$ 1,200.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 70    | Mbps | \$ 1,300.00    | 3%           | \$ 1,300.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 80    | Mbps | \$ 1,400.00    | 3%           | \$ 1,400.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 90    | Mbps | \$ 1,511.00    | 3%           | \$ 1,511.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 100   | Mbps | \$ 1,611.00    | 3%           | \$ 1,611.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 200   | Mbps | \$ 1,811.00    | 3%           | \$ 1,811.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 300   | Mbps | \$ 2,022.00    | 3%           | \$ 2,022.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 400   | Mbps | \$ 2,222.00    | 3%           | \$ 2,222.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 500   | Mbps | \$ 2,433.00    | 3%           | \$ 2,433.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 600   | Mbps | \$ 2,633.00    | 3%           | \$ 2,633.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 700   | Mbps | \$ 2,844.00    | 3%           | \$ 2,844.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 800   | Mbps | \$ 3,044.00    | 3%           | \$ 3,044.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 900   | Mbps | \$ 3,256.00    | 3%           | \$ 3,256.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 1000  | Mbps | \$ 3,456.00    | 3%           | \$ 3,456.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 2000  | Mbps | \$ 3,656.00    | 3%           | \$ 3,656.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 3000  | Mbps | \$ 4,533.00    | 3%           | \$ 4,533.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 4000  | Mbps | \$ 5,622.00    | 3%           | \$ 5,622.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 5000  | Mbps | \$ 6,967.00    | 3%           | \$ 6,967.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 6000  | Mbps | \$ 8,633.00    | 3%           | \$ 8,633.03  | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 7000  | Mbps | \$ 10,711.00   | 3%           | \$ 10,711.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 8000  | Mbps | \$ 13,278.00   | 3%           | \$ 13,278.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 9000  | Mbps | \$ 16,467.00   | 3%           | \$ 16,467.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 10000 | Mbps | \$ 20,422.00   | 3%           | \$ 20,422.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 20000 | Mbps | \$ 27,223.00   | 3%           | \$ 27,223.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 30000 | Mbps | \$ 34,024.00   | 3%           | \$ 34,024.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 40000 | Mbps | \$ 40,824.00   | 3%           | \$ 40,824.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 50000 | Mbps | \$ 47,645.00   | 3%           | \$ 47,645.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 60000 | Mbps | \$ 54,446.00   | 3%           | \$ 54,446.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 70000 | Mbps | \$ 61,246.00   | 3%           | \$ 61,246.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 80000 | Mbps | \$ 68,067.00   | 3%           | \$ 68,067.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |
| EVPL - Premium Network Bandwidth            | 90000 | Mbps | \$ 74,868.00   | 3%           | \$ 74,868.03 | SEE NETWORK INTERFACE CHARGES | \$0                              | FIBER                        |                  |

|                                       |          |      |    |            |    |              |                               |     |        |
|---------------------------------------|----------|------|----|------------|----|--------------|-------------------------------|-----|--------|
| EVPL - Premium Network Bandwidth      | 100000   | Mbps | \$ | 81,688.00  | 3% | \$ 81,688.03 | SEE NETWORK INTERFACE CHARGES | \$0 | FIBER  |
| <b>Ethernet Network Interface</b>     |          |      |    |            |    |              |                               |     |        |
| Ethernet Network Interface - 10 / 100 | PER PORT |      |    | \$165.00   | 3% | \$ 165.03    | \$ 500.00                     | \$0 | COPPER |
| Ethernet Network Interface - Gig E    | PER PORT |      |    | \$715.00   | 3% | \$ 715.03    | \$ 3,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 10 Gig   | PER PORT |      |    | \$2,250.00 | 3% | \$ 2,250.03  | \$ 5,000.00                   | \$0 | FIBER  |
| Ethernet Network Interface - 100 Gig  | PER PORT |      |    | \$9,000.00 | 3% | \$ 9,000.03  | \$ 10,000.00                  | \$0 | FIBER  |

PRICING PROPOSAL FORM

FUNCTIONAL AREA IV (Commodity Internet Service Delivery)

| DESCRIPTION                                      | COST PER MONTH | TAXES / FEES | TOTAL NRC | NRC          | ONE - TIME COST TO EXTEND DEMARC   | TRANSPORT MEDIUM             | HAND-OFF OPTIONS                      |
|--|----------------|--------------|-----------|--------------|------------------------------------|------------------------------|---------------------------------------|
| <b>ETHERNET DEDICATED INTERNET SERVICE (EDI)</b> |                |              |           |              |                                    |                              |                                       |
| EDI - Bandwidth                                  | 1 Mbps         | \$ 161.70    | 0%        | \$ 161.70    | SEE NETWORK INTERFACE COSTS \$0.00 | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth                                  | 2 Mbps         | \$ 238.70    | 0%        | \$ 238.70    | SEE NETWORK INTERFACE COSTS \$0.00 | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth                                  | 3 Mbps         | \$ 315.70    | 0%        | \$ 315.70    | SEE NETWORK INTERFACE COSTS \$0.00 | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth                                  | 4 Mbps         | \$ 392.70    | 0%        | \$ 392.70    | SEE NETWORK INTERFACE COSTS \$0.00 | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth                                  | 5 Mbps         | \$ 469.70    | 0%        | \$ 469.70    | SEE NETWORK INTERFACE COSTS \$0.00 | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth                                  | 6 Mbps         | \$ 546.70    | 0%        | \$ 546.70    | SEE NETWORK INTERFACE COSTS \$0.00 | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth                                  | 7 Mbps         | \$ 623.70    | 0%        | \$ 623.70    | SEE NETWORK INTERFACE COSTS \$0.00 | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth                                  | 8 Mbps         | \$ 697.20    | 0%        | \$ 697.20    | SEE NETWORK INTERFACE COSTS \$0.00 | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth                                  | 9 Mbps         | \$ 770.00    | 0%        | \$ 770.00    | SEE NETWORK INTERFACE COSTS \$0.00 | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth                                  | 10 Mbps        | \$ 843.50    | 0%        | \$ 843.50    | SEE NETWORK INTERFACE COSTS \$0.00 | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth                                  | 11 Mbps        | \$ 856.80    | 0%        | \$ 856.80    | SEE NETWORK INTERFACE COSTS \$0.00 | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth                                  | 13 Mbps        | \$ 884.80    | 0%        | \$ 884.80    | SEE NETWORK INTERFACE COSTS \$0.00 | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth                                  | 15 Mbps        | \$ 912.80    | 0%        | \$ 912.80    | SEE NETWORK INTERFACE COSTS \$0.00 | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth                                  | 20 Mbps        | \$ 982.10    | 0%        | \$ 982.10    | SEE NETWORK INTERFACE COSTS \$0.00 | HYBRID FIBER - COAX or FIBER |                                       |
| EDI - Bandwidth                                  | 25 Mbps        | \$ 1,047.20  | 0%        | \$ 1,047.20  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 30 Mbps        | \$ 1,113.00  | 0%        | \$ 1,113.00  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 40 Mbps        | \$ 1,239.70  | 0%        | \$ 1,239.70  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 50 Mbps        | \$ 1,362.90  | 0%        | \$ 1,362.90  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 60 Mbps        | \$ 1,482.60  | 0%        | \$ 1,482.60  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 70 Mbps        | \$ 1,598.10  | 0%        | \$ 1,598.10  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 80 Mbps        | \$ 1,709.40  | 0%        | \$ 1,709.40  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 90 Mbps        | \$ 1,817.20  | 0%        | \$ 1,817.20  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 100 Mbps       | \$ 1,921.50  | 0%        | \$ 1,921.50  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 200 Mbps       | \$ 2,730.00  | 0%        | \$ 2,730.00  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 300 Mbps       | \$ 3,461.50  | 0%        | \$ 3,461.50  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 400 Mbps       | \$ 4,116.00  | 0%        | \$ 4,116.00  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 500 Mbps       | \$ 4,712.40  | 0%        | \$ 4,712.40  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 600 Mbps       | \$ 5,251.40  | 0%        | \$ 5,251.40  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 700 Mbps       | \$ 5,733.00  | 0%        | \$ 5,733.00  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 800 Mbps       | \$ 6,156.50  | 0%        | \$ 6,156.50  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 900 Mbps       | \$ 6,541.50  | 0%        | \$ 6,541.50  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 1000 Mbps      | \$ 6,888.00  | 0%        | \$ 6,888.00  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 2000 Mbps      | \$ 9,236.50  | 0%        | \$ 9,236.50  | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 3000 Mbps      | \$ 11,469.50 | 0%        | \$ 11,469.50 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 4000 Mbps      | \$ 13,587.00 | 0%        | \$ 13,587.00 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 5000 Mbps      | \$ 15,627.50 | 0%        | \$ 15,627.50 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 6000 Mbps      | \$ 17,591.00 | 0%        | \$ 17,591.00 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 7000 Mbps      | \$ 19,477.50 | 0%        | \$ 19,477.50 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 8000 Mbps      | \$ 21,287.00 | 0%        | \$ 21,287.00 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 9000 Mbps      | \$ 23,019.50 | 0%        | \$ 23,019.50 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 10000 Mbps     | \$ 24,675.00 | 0%        | \$ 24,675.00 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 20000 Mbps     | \$ 32,892.30 | 0%        | \$ 32,892.30 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 30000 Mbps     | \$ 41,108.90 | 0%        | \$ 41,108.90 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 40000 Mbps     | \$ 49,325.50 | 0%        | \$ 49,325.50 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 50000 Mbps     | \$ 57,567.30 | 0%        | \$ 57,567.30 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 60000 Mbps     | \$ 65,783.90 | 0%        | \$ 65,783.90 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 70000 Mbps     | \$ 74,000.50 | 0%        | \$ 74,000.50 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 80000 Mbps     | \$ 82,242.30 | 0%        | \$ 82,242.30 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 90000 Mbps     | \$ 90,458.90 | 0%        | \$ 90,458.90 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Bandwidth                                  | 100000 Mbps    | \$ 98,700.00 | 0%        | \$ 98,700.00 | SEE NETWORK INTERFACE COSTS \$0.00 | FIBER                        |                                       |
| EDI - Network Interface - 10 / 100               | Port           | \$0.00       | \$0.00    | \$0.00       | \$1,000.00                         |                              | COPPER ONLY                           |
| EDI - Network Interface - Gig E                  | Port           | \$0.00       | \$0.00    | \$0.00       | \$1,000.00                         |                              | COPPER OR FIBER (CUSTOMER PREFERENCE) |
| EDI - Network Interface - 10 Gig                 | Port           | \$0.00       | \$0.00    | \$0.00       | \$1,000.00                         |                              | FIBER ONLY                            |
| EDI - Network Interface - 100 Gig                | Port           | \$0.00       | \$0.00    | \$0.00       | \$1,000.00                         |                              | FIBER ONLY                            |
| Border Gateway Protocol                          | Setup          | \$0          | \$0       | \$0          | \$500.00                           |                              |                                       |
| IPv4 Static Address Block /30 (2)                | 1              | Static IP    | \$20.00   | 3%           | \$ 20.03                           | \$0                          |                                       |
| IPv4 Static Address Block /29 (6)                | 1              | Static IP    | \$25.00   | 3%           | \$ 25.03                           | \$0                          |                                       |

|  |   |           |            |    |             |     |
|--|---|-----------|------------|----|-------------|-----|
| IPv4 Static Address Block /28 (14)     | 1 | Static IP | \$30.00    | 3% | \$ 30.03    | \$0 |
| IPv4 Static Address Block /27 (30)     | 1 | Static IP | \$50.00    | 3% | \$ 50.03    | \$0 |
| IPv4 Static Address Block /26 (62)     | 1 | Static IP | \$75.00    | 3% | \$ 75.03    | \$0 |
| IPv4 Static Address Block /25 (126)    | 1 | Static IP | \$100.00   | 3% | \$ 100.03   | \$0 |
| IPv4 Static Address block /24 (254)    | 1 | Static IP | \$200.00   | 3% | \$ 200.03   | \$0 |
| IPv4 Static Address Block /23 (510)    | 1 | Static IP | \$400.00   | 3% | \$ 400.03   | \$0 |
| IPv4 Static Address Block /22 (1022)   | 1 | Static IP | \$800.00   | 3% | \$ 800.03   | \$0 |
| IPv4 Static Address Block /21 (2046)   | 1 | Static IP | \$1,600.00 | 3% | \$ 1,600.03 | \$0 |
| IPv4 Static Address Block /20 (4094)   | 1 | Static IP | \$3,200.00 | 3% | \$ 3,200.03 | \$0 |
| IPv4 Static Address Block /19 (8190)   | 1 | Static IP | \$6,400.00 | 3% | \$ 6,400.03 | \$0 |
| IPv6 Static Address Block /48 (65,536) | 1 | Static IP | ICB        | 3% | ICB         | \$0 |

**DDOS MITIGATION (OPTIONAL)**

|                                       |                        |                  |
|---------------------------------------|------------------------|------------------|
| <b>One-Time Setup fee</b>             | \$1,800                |                  |
| <b>Service Options with 36 months</b> |                        |                  |
| <b>EDI Bandwidth</b>                  | <b>Single Incident</b> | <b>Unlimited</b> |
| 1 < BW ≤ 50                           | \$1,020                | \$2,550          |
| 50 < BW ≤ 100                         | \$1,700                | \$3,400          |
| 100 < BW ≤ 500                        | \$2,550                | \$4,250          |
| 500 < BW ≤ 1000                       | \$3,400                | \$6,800          |
| 1000 < BW ≤ 5000                      | \$4,250                | \$9,350          |
| 5000 < BW ≤ 10000                     | \$5,100                | \$11,900         |

|   |                     |
|---|---------------------|
| <b>For each additional mitigation for Single Incident subscribers</b> |                     |
| <b>EDI Bandwidth Range (Mbps)</b>                                     | <b>Per Incident</b> |
| 1 < BW ≤ 50   | \$720               |
| 50 < BW ≤ 100   | \$900               |
| 100 < BW ≤ 500  | \$1,080             |
| 500 < BW ≤ 1000   | \$1,440             |
| 1000 < BW ≤ 5000  | \$2,100             |
| 5000 < BW ≤ 10000   | \$2,700             |

- Single Incident: An incremental NRC charge applies beyond 1 mitigation incident in a monthly billing cycle
- A mitigation incident is a 24-hour time window in which Comcast provides customer with as many mitigations as needed

| DESCRIPTION              | COST PER MONTH | TAXES / FEES | MRC      | NRC | ONE TIME COST | EXTEND DEMARC | TRANSPORT MEDIUM | HAND-OFF OPTIONS                                   |
|--------------------------|----------------|--------------|----------|-----|---------------|---------------|------------------|--|
| <b>BUSINESS INTERNET</b> |                |              |          |     |               |               |                  |  |
|                          | UPLOAD         | DOWNLOAD     |          |     |               |               |                  |  |
| DOCSIS - BROADBAND       | 5              | 25           | \$99.95  | \$0 | \$99.95       | \$199.00      | \$0.00           |  |
| DOCSIS - BROADBAND       | 15             | 75           | \$149.95 | \$0 | \$149.95      | \$199.00      | \$0.00           | ETHERNET (with option of WIRELESS ROUTER included) |
| DOCSIS - BROADBAND       | 25             | 150          | \$249.95 | \$0 | \$249.95      | \$199.00      | \$0.00           | ETHERNET (with option of WIRELESS ROUTER included) |
| DOCSIS - BROADBAND       | 25             | 250          | \$349.95 | \$0 | \$349.95      | \$199.00      | \$0.00           | ETHERNET (with option of WIRELESS ROUTER included) |
| DOCSIS - BROADBAND       | 30             | 500          | \$399.95 | \$0 | \$399.95      | \$199.00      | \$0.00           | ETHERNET (with option of WIRELESS ROUTER included) |
| DOCSIS - BROADBAND       | 35             | 1000         | \$499.95 | \$0 | \$499.95      | \$199.00      | \$0.00           | ETHERNET (with option of WIRELESS ROUTER included) |
| Modem / Equipment rental |                |              | \$14.95  | 3%  | \$14.98       |               |                  |  |
| Optional Static IPs:     |                |              |          |     |               |               |                  |  |
|                          | 1              |              | \$19.95  | 3%  | \$19.98       |               |                  |  |
|                          | 5              |              | \$24.95  | 3%  | \$24.98       |               |                  |  |
|                          | 13             |              | \$39.95  | 3%  | \$39.98       |               |                  |  |
| CONNECTION PRO (ADD ON)  | 4GLTE BACKUP   |              | \$29.95  | 3%  | \$29.98       | \$0           | CELLULAR         |  |

